



DEPARTMENT OF THE NAVY
SUPERVISOR OF SHIPBUILDING, CONVERSION, AND REPAIR, USN
SEATTLE, WASHINGTON 98115-5003

509-946-4330

IN REPLY REFER TO:

4710

Ser 410-677

09 February 1988

Mr. Bill Zavin, President
Northwest Marine Iron Works
P.O. Box 3109
Portland, Oregon 97208

Dear Bill,

This is in response to your letter of 22 January 1988 which deals with the status of DULUTH, CUSHING and STORIS.

a. USS CUSHING: DCAA audit is now completed. Technical analysis nearing completion. The Technical Analyst has requested copies of purchase orders to substantiate subcontract costs from your Mr. Costorini. Requested information has not been forthcoming and can be expected to affect the Government position.

b. USS DULUTH: DCAA audit is now completed. Prenegotiation business clearance is being prepared for submission to NAVSEA for approval. Application of ceiling factor to negotiated target costs is included in the audit for consideration in the R.E.A.

c. USCGS STORIS: Review of CFRs received not yet completed. Contractor will be advised when completed.

Very truly yours

R.R. MORRISON
Contract Officer



DEPARTMENT OF THE NAVY
OFFICE OF THE GENERAL COUNSEL
COUNSEL FOR THE
SUPERVISOR OF SHIPBUILDING, CONVERSION, AND REPAIR, USN
SEATTLE, WA 98115

IN REPLY REFER TO:
4710
7 April 1988

John T. Jozwick, Esq.
Taylor & Hintze
900 AGC Building
1200 Westlake Avenue North
Seattle, Washington 98109

RECEIVED

APR 11 1988

Re: USS DULUTH (LPD-6); Contract N00024-85-C-8506 Target - TAYLOR & HINTZE
Ceiling Adjustment of Outstanding Modifications

Dear Mr. John:

Reference is made to your letter of March 28, 1988.

It appears to me what we are talking about here is an impasse in negotiations and not really a legal issue at all.

Adjustments to ceiling for each and every change should be a matter of negotiation no different than applicable cost or level of profit. While contractors often talk in terms of 10% profit being their ordained right, there is no a priori reason that 10% is any more appropriate than 1, 3, or 5%.

I would be very surprised if anyone at SUPSHIP has taken the position that ceiling should not be adjusted upward in an amount at least equal to the negotiated increase in target price. To not do so would destroy any incentive for the contractor to negotiate reasonable and accurate price adjustments.

The correspondence seems to indicate a position by the contractor that a 130% ceiling price adjustment should automatically be applied in all modification agreements consistent with schedule B. However, let me remind you that schedule B also calls for zero profit and a manhour rate of \$19/hour. In view of those facts your client surely doesn't want all contract negotiations controlled by the terms of schedule B.

Please advise if you still believe we have other than an impasse in negotiations.

Very truly yours,

James D. Beback
JAMES D. BEBACK

NWMAR130641



DEPARTMENT OF THE NAVY

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SEATTLE, WASHINGTON 98115-5003

APR 12 1988

IN REPLY REFER TO:

4710
Ser 410-1594

APR 06 1988

Mr. Bill Zavin, President
Northwest Marine Iron Works
P.O. Box 3109
Portland, Oregon 97208

Dear Bill,

This in response to the recent inquiries of John Jozwick concerning the status of our work incident to DULUTH, CUSHING and STORIS. You will recall my reluctance to express actual dates on which we would be ready to commence negotiations for purposes of concluding outstanding items on these contracts. The DULUTH REA is a voluminous and highly complex situation on which the government has spent many man days of effort. Those functions continue as this is being written, and once completed locally, it must be passed through NAVSEA for concurrence prior to commencing negotiations.

I am advised that your inquiries are made at the request of your Banker. Please be assured that progress is being made, and you will be immediately advised when negotiations can proceed.

A response to your request on STORIS will be forwarded separately.

Very truly yours,

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APR 12 1988

NW MAR 130644

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Very truly yours,

R. R. MORRISON
Contract Officer

NWMAR130647



From the desk of: F. W. MAXWELL

11 March 1988

Subject: Summary of activities for the week ending
11 March 1988

1. Completed the write-up for the system analysis of the STORIS Steam and Condensate piping. This is the last system analysis to be included in the claim package.
2. Met with Jim Coleman to discuss support required from NMIW Estimating and Material departments for completion of the STORIS claim effort.
3. Composed detailed outline of items that require NMIW Estimating department review and met with George Riddle to go over each item. Mr. Riddle stated that he would be able to support the effort, but would have to work the package in between estimating priorities for upcoming "new business" targets. Mr. Riddle stated that his department would attempt to complete the STORIS estimating tasks no later than 8 April.
4. Provided Bob Huget with a compilation of material items requiring pricing for the STORIS claim package. These items were identified during system analysis reviews. Mr. Huget stated that his department would complete this pricing task within two weeks.
5. Boxed up file data pertinent to STORIS, DULUTH, and CUSHING claims that had been in storage in Jerry McMurry's office. Arranged to have this data shipped to the Seattle offices of Taylor & Hintze for safe keeping. This material will be stored with the claim files already existing in storage at that location.

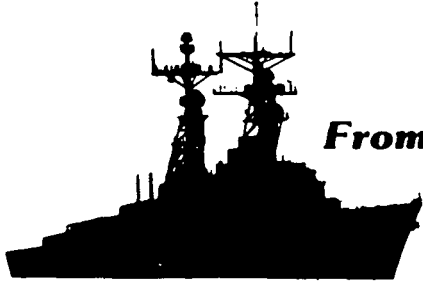
Cont'd.

NWMAR130648

6. Meeting with John Jozwick and Randy Zuke at the Seattle offices of Taylor & Hintze to discuss questions arising from Mr. Jozwick's review of the STORIS data developed to date. Reviewed plots of manhour and craft usage data generated from STORIS computer files. Composed and discussed an outline for generating an appropriate overview of the STORIS contract and its conduct at NMIW.
7. Started review of USS JARRETT (FFG 33) specifications in preparation for effort that may be required for the technical proposal.

respectfully,

A handwritten signature in cursive script, appearing to read "T. W. Maxwell", with a long horizontal flourish extending to the right.



From the desk of: F. W. MAXWELL

8 February 1988

Subject: Summary of activities from 1 February through
8 February 1988

1. Discovered another apparent Constructive Change to the STORIS contract in the form of direction from the Government concerning the main engine exhaust system. Confirmed the actual occurrence of this direction and resultant NMIW costs through discussions with Don Stevens and Maurrie Eide. Revised existing system analysis write-up to include this additional item. Reviewed this change with Dennis Chard for incorporation on our system overlay drawing package.
2. Reviewed manhour usage summaries for the STORIS contract provided by Jerry McMurry. Also reviewed the cost report for data on the Work Items that are the subject of the claim. Forwarded copies of these reports to Randy Zuke of Taylor & Hintze in Seattle for review at a meeting on 5 February 1988.
3. Started effort on analysis and write-up for the STORIS Steam and Condensate system. This is the last system to be included in the STORIS claim package.
4. Met with Don Nugent to set up a 30 minute period of time next Wednesday or Thursday to discuss details concerning preparation of the FOSTER Performance Fee Report. My goal is to be able to leave the meeting with firm ideas for composing another report that is responsive to contract requirements and effective in communicating our superior management abilities.

Cont'd.

5. Met with Randy Zuke of Taylor & Hintze on Monday, 8 February, to discuss manhour useage data and cost reports from STORIS contract. This meeting was rescheduled from Friday, 5 February, due to a conflict in Randy's schedule. Reviewed data to determine if it will lend itself to demonstrating the specified damages to NMIW and to decide in what format this information can be most usefully presented for our purposes. We will plot the manhour data by craft by week and for the total job to show impact areas.

I provided Randy with a copy of all system analysis write-ups completed to date for his use in researching appropriate legal justification for recovery of STORIS costs. Our entitlement to compensation will be based on "defective specifications" and "Constructive Changes under the Changes clause. Research will also attempt to find a basis for cost recovery when a contractor is unable to accurately determine specific change costs because the government issued so many modifications to a Work Item that it overburdened the craftsmen's ability to accurately keep track of time charges in the field.

We will meet again next Monday, 15 February, to begin to construct the rough draft of the overall contract Statement of Facts using an approach most supportive of our claim situation and backed by conclusive "case law".

respectfully,

A handwritten signature in cursive script, appearing to read "P. Maxwell", with a long horizontal flourish extending to the right.

NORTHWEST MARINE IRON WORKS

USS CUSHING (DD-985)

SUMMARY OF CONTRACT MODIFICATIONS

ACCUMULATED

| MOD NO. | TARGET | TARGET | TARGET | CEILING | ACCUMULATED | |
|----------|----------|--------|----------|----------|-------------|----------|
| | COST | PROFIT | PRICE | | TARGET | CEILING |
| | | | | | COST | CEILING |
| 235 | 11496 | 1149 | 12645 | 14945 | 19144771 | 24888214 |
| 236 | 13992 | 1381 | 15373 | 18190 | 19158763 | 24906404 |
| 237 | 62012 | 6063 | 68075 | 80616 | 19220775 | 24987020 |
| 238 | 25250 | 0 | 25250 | 32825 | 19246025 | 25019845 |
| 239 | 1714 | 198 | 2513 | 2228 | 19247739 | 25022073 |
| 240 | 16000 | 0 | 16000 | 20900 | 19263739 | 25042873 |
| 241 | -12330 | 0 | -12330 | -16029 | 19251409 | 25026844 |
| 242 | 33122 | 0 | 33122 | 43059 | 19284531 | 25069903 |
| 243 | 0 | 0 | 0 | 0 | 19284531 | 25069903 |
| 244 | 14246 | 1424 | 15670 | 18520 | 19298777 | 25088423 |
| 245 | 11080 | 0 | 11080 | 14404 | 19309857 | 25102827 |
| 246 | 22164 | 0 | 22164 | 28813 | 19332021 | 25131640 |
| 247 | 84551 | 8247 | 92798 | 109916 | 19416572 | 25241556 |
| 248 | 14252 | 0 | 14252 | 18528 | 19430824 | 25260084 |
| 249 | 4090 | 0 | 4090 | 5317 | 19434914 | 25265401 |
| 250 | 7457 | 742 | 8199 | 9694 | 19442371 | 25275095 |
| 251 | 1951 | 0 | 1951 | 2537 | 19444322 | 25277632 |
| 252 | 16302 | 0 | 16302 | 21193 | 19460624 | 25298825 |
| 253 | 8583 | 0 | 8583 | 11157 | 19469207 | 25309982 |
| 254 | 9657 | 0 | 9657 | 12555 | 19478864 | 25322537 |
| 255 | 5524 | 0 | 5524 | 7181 | 19484388 | 25329718 |
| 256 | 4220 | 0 | 4220 | 5485 | 19488608 | 25335203 |
| 257 | 48955 | 0 | 48955 | 63642 | 19537563 | 25398845 |
| 258 | 4923 | 492 | 5415 | 6400 | 19542486 | 25405245 |
| 259 | 5897 | 0 | 5897 | 7666 | 19548383 | 25412911 |
| 260 | 14948 | 1474 | 16422 | 19432 | 19563331 | 25432343 |
| 261 | 20584 | 2018 | 22602 | 26759 | 19583915 | 25459102 |
| 262 | 13200 | 1320 | 14520 | 17160 | 19597115 | 25476262 |
| 263 | 97729 | 0 | 98514 | 127048 | 19694844 | 25603310 |
| 264 | 3850 | 385 | 4235 | 5005 | 19698694 | 25608315 |
| ROUNDING | | | | -1 | 19698694 | 25608314 |
| TOTAL | 19698694 | 695473 | 20396286 | 25608314 | | |

NORTHWEST MARINE I
 USS DULUTH (LPD-6)
 SUMMARY OF CONTRACT MODIFIC

| MOD NO. | TARGET COST | TARGET PROFIT | TARGET PRICE | CEILING | ACCUM CEILINGS |
|----------|----------------|------------------|-----------------|-------------------|-------------------|
| 188 | 0 | 0 | 0 | 0 | 20,474,446 |
| 189 | 0 | 0 | 0 | 0 | 20,474,446 |
| 190 | | | 0 | 0 | 20,474,446 |
| 191 | 330 | 33 | 363 | 429 | 20,474,875 |
| 192 | 9,943 | 990 | 10,933 | 12,926 | 20,487,801 |
| 193 | 5,414 | 591 | 6,005 | 7,038 | 20,494,839 |
| 194 | 6,305 | 617 | 6,922 | 8,197 | 20,503,036 |
| 195 | 27,348 | 2,712 | 30,060 | 35,552 | 20,538,588 |
| 196 | 2,223 | 222 | 2,445 | 2,890 | 20,541,478 |
| 197 | 18,241 | 1,824 | 20,065 | 23,713 | 20,565,191 |
| 198 | 14,637 | 1,464 | 16,101 | 19,028 | 20,584,219 |
| 199 | (11,959) | (1,196) | (13,155) | (15,547) | 20,568,672 |
| 200 | 0 | 0 | 0 | 0 | 20,568,672 |
| ROUNDING | | | | 1 | 20,568,673 |
| TOTAL | 15,822,011 | 381,180 | 16,203,191 | <u>20,568,673</u> | |



COMMANDING OFFICER
SUPERVISOR OF SHIPBUILDING
CONVERSION, AND REPAIR, USN
SEATTLE, WASHINGTON 98118-6009
17 May 1988

Dear Mr. Zavin,

I appreciate your concerns regarding the resolution of requests for equitable adjustment on USS Duluth and USS Cushing. I assure you that the Navy has every intention and is making every reasonable effort to settle these REA's.

Since our last letter to you on the subject of the REA's we have progressed to the point where negotiations can soon be undertaken in the case of USS Cushing. While I am reluctant to indicate an actual date, it is expected that negotiations can proceed in early June for Cushing.

In the case of USS Duluth, final documentation for submission to NAVSEA for concurrence is progressing, however, it has not moved as quickly as hoped, so it will be a bit further down stream.

I'm sure you can appreciate the need for us to thoroughly evaluate the basis and value of your entitlement on these issues. A considerable amount of time and resources have been expended in this endeavor. As has been mentioned previously, claims of this magnitude and complexity just do not lend themselves to prompt disposition. However we will continue to do our best to achieve a prompt settlement.

Sincerely,

J. P. KELSEY
Commander, U. S. Navy

Mr. William H. Zavin II
President, Northwest Marine Iron Works
5555 North Channel Avenue Bldg 2
Portland, OR 97217

| J N | | | | S | A F | | | | | |
|--------------|------|-----------|---|---|-----|-----------|-----------|-------|----------|----------|
| O U | | | | T | G P | PROP | SETLD | SETLD | SETLD | SETLD |
| B M | TASK | WORK ITEM | DESCRIPTION | A | R R | PRICE | PRICE | HOURS | MATL | SUB |
| | | | | T | | | | | | |
| 6 295 A00001 | | 100007 | GENERAL SERVICES FOR SPONSOR | S | FPR | 35041.00 | 32772.00 | 200 | 21634.00 | 0.00 |
| 6 295 A00002 | | 100018 | STORAGE SPACE REQUIERMENTS | S | FPR | 48313.00 | 24632.00 | 240 | 10200.00 | 0.00 |
| 6 295 A00003 | | 100702 | RED AUDIO SYSTEM UPGRADE | S | AGR | -7035.00 | -7035.00 | -150 | -985.00 | -2300.00 |
| 6 295 A00004 | | 100711 | LOAD TEST MEASUREMENT | S | AGR | 200.00 | 0.00 | 0 | 0.00 | 0.00 |
| 6 295 A00005 | | 100712 | WSC 1 ANTENNAS (IRAN) | S | AGR | 5654.00 | 0.00 | 0 | 0.00 | 0.00 |
| 6 295 A00006 | | 100713 | COMMUNICATIONS VERTICAL WHIP ANTENNAS (IRAN) | S | AGR | 5654.00 | 0.00 | 0 | 0.00 | 0.00 |
| 6 295 A00007 | | 100714 | S-BAND PHASED ARRAY RADAR ANTENNA (IRAN) | S | AGR | 60552.00 | 20009.00 | 0 | 3192.00 | 16000.00 |
| 6 295 A00008 | | 100715 | X-BAND RADAR ANTENNA MOUNT (IRAN) | C | FPR | 0.00 | 0.00 | 0 | 0.00 | 0.00 |
| 6 295 A00009 | | 100717 | OFFICE UPGRADE | S | AGR | 35613.00 | 20665.00 | 300 | 0.00 | 12649.00 |
| 6 295 A00010 | | 100719 | STATEROOM&CONFERENCE RM CARPET CLEANING&REPLACEMEN | S | AGR | 22517.00 | 23975.00 | 200 | 0.00 | 16317.00 |
| 6 295 A00011 | | 100724 | LOG PERIODIC ANTENNA & ROTATOR (IRAN) | S | AGR | 7400.00 | -3264.00 | 0 | -3264.00 | 0.00 |
| 6 295 A00012 | | 100726 | EXERCISE ROOM UPGRADE | S | AGR | 7553.00 | 7483.00 | 80 | 4361.00 | 0.00 |
| 6 295 A00013 | | 100727 | SAVIN COPIER INSPECTION AND REPAIR | S | AGR | 808.00 | 0.00 | 0 | 0.00 | 0.00 |
| 6 295 A00014 | | 100729 | PROTECTION OF ESMC INSTRUMENTATION | S | AGR | 16725.00 | 14400.00 | 576 | 0.00 | 0.00 |
| 6 295 A00015 | | 100730 | INSTRUMENTATION GUAGE, THERMOMETER, SENSORS&INDI CA | S | AGR | 2863.00 | -792.00 | 40 | 0.00 | -1800.00 |
| 6 295 A00016 | | 100732 | X-BAND HVAC UNIT SERVICES & REPAIR | S | AGR | 2928.00 | 1724.00 | 48 | 100.00 | 400.00 |
| 6 295 A00017 | | 100735 | OCC UPGRADE | C | FPR | 0.00 | 0.00 | 0 | 0.00 | 0.00 |
| 6 295 A00018 | | 100736 | INTRUSION ALARM SYSTEM | S | AGR | 31637.00 | 26579.00 | 806 | 800.00 | 4725.00 |
| 6 295 A00019 | | 100748 | HVAC/TWT COOLANT SYSTEM STATUS MODIFICATION | S | AGR | 147791.00 | 140817.00 | 3600 | 34000.00 | 7980.00 |
| 6 295 A00020 | | 100723 | DISINTEGRATOR INSPECTION AND REPAIRS | S | AGR | 2643.00 | 1742.00 | 44 | 50.00 | 580.00 |
| 6 295 A00021 | | 100731 | SPONSOR BULK STORAGE AREA | C | AGR | 0.00 | 0.00 | 0 | 0.00 | 0.00 |
| 6 295 A00022 | | 100201 | EXPANSION JOINT REPAIRS | S | AGR | 48548.00 | 38000.00 | 753 | 14526.00 | 1175.00 |
| 6 295 A00023 | | 100720 | SUPPLY AREA IMPROVEMENTS | C | AGR | 222.00 | 0.00 | 0 | 0.00 | 0.00 |
| 6 295 A00024 | | 100734 | ADP MODIFICATION | S | AGR | 10409.00 | 9014.00 | 160 | 400.00 | 4600.00 |
| 6 295 A00025 | | 100737 | S-BAND TURRET TRANE AIR HANDLER | C | AGR | 332.00 | 0.00 | 0 | 0.00 | 0.00 |
| 6 295 A00026 | | 100738 | DATA STOREROOM VAULT DOOR | S | AGR | 12831.00 | 11501.00 | 197 | 3715.00 | 1900.00 |
| 6 295 A00027 | | 100739 | MISSION COMM CENTER VAULT DOOR | S | AGR | 12357.00 | 11501.00 | 230 | 3500.00 | 1418.00 |
| 6 295 A00028 | | 100740 | X-BAND BTR UPGRADE | S | AGR | 19137.00 | 16240.00 | 474 | 500.00 | 3195.00 |
| 6 295 A00029 | | 100741 | ENTERTAINMENT SYSTEM UPGRADE | S | AGR | 32739.00 | 30442.00 | 766 | 6490.00 | 2116.00 |
| 6 295 A00030 | | 100742 | DAKITE RECORDER UPGRADE | S | AGR | 29756.00 | 24601.00 | 700 | 1300.00 | 5000.00 |
| 6 295 A00031 | | 100743 | DAKITE TOPAZ POWER CONDITIONER | S | AGR | 8497.00 | 8200.00 | 56 | 5000.00 | 530.00 |
| 6 295 A00032 | | 100745 | A1 AND A2 DISCONNECT SWITCH | S | AGR | 6006.00 | 5564.00 | 128 | 750.00 | 1400.00 |
| 6 295 A00033 | | 100746 | DOD HABITABILITY UPGRADE | S | AGR | 40626.00 | 38208.00 | 600 | 13000.00 | 4300.00 |
| 6 295 A00034 | | 100747 | SPONSOR POWER AND IC ROOM UPGRADE | S | AGR | 11441.00 | 10409.00 | 188 | 1700.00 | 2705.00 |
| 6 295 A00035 | | 100910 | SEA VALVES AND OVERBOARD | C | AGR | 4905.00 | 0.00 | 0 | 0.00 | 0.00 |

| J N O U B M | TASK | WORK ITEM | DESCRIPTION | S T A T | A F G P R R | PROP PRICE | SETLD PRICE | SETLD HOURS | SETLD MATL | SETLD SUB |
|-------------------|------|-----------|---|------------------|-------------------|---------------|----------------|----------------|---------------|--------------|
| | | | DISCHARGE VALVES | | | | | | | |
| 6 295 A00036 | | 100110 | ENGINE ROOM OVERHEAD PAINTING | S | AGR | 42312.00 | 32544.00 | 1277 | 500.00 | 0.00 |
| 6 295 A00037 | | 100923 | UNDERWATER HULL PRESERVATION, SPOT REPAIRS TO 30 | S | AGR | 400.00 | 0.00 | 0 | 0.00 | 0.00 |
| 6 295 A00038 | | 100926 | UNDERWATER HULL, COMPLETE REPAINT WITH 30 MONTH AB | S | AGR | 400.00 | 0.00 | 0 | 0.00 | 0.00 |
| 6 295 A00039 | | 100521 | ANCHOR WINDLASS | S | AGR | 35809.00 | 29196.00 | 693 | 3500.00 | 7194.00 |
| 6 295 A00040 | | 100609 | VARIOUS LAGGING AND INSULATION REPAIRS | S | AGR | 25867.00 | 16548.00 | 600 | 1250.00 | 0.00 |
| 6 295 A00041 | | 100605 | INTERIOR TILE AND UNDERLAY REPLACEMENT | S | AGR | 16651.00 | 14002.00 | 160 | 0.00 | 9251.00 |
| 6 295 A00042 | | 100110 | ENGINE ROOM OVERHEAD PAINTING | S | AGR | 16287.00 | 12619.00 | 480 | 500.00 | 0.00 |
| 6 295 A00043 | | 100522 | PORT AND STARBOARD CAPSTAN OVERHAUL | S | AGR | 49294.00 | 41063.00 | 1069 | 10000.00 | 1944.00 |
| 6 295 A00044 | | 100523 | AUXILIARY EXHAUST MAKE UP VALVE | S | AGR | 8362.00 | 8239.00 | 160 | 3425.00 | 0.00 |
| 6 295 A00045 | | 100749 | SPONSOR BULK STORAGE AREA | C | AGR | 382.00 | 0.00 | 0 | 0.00 | 0.00 |
| 6 295 A00046 | | 100733 | SPONSOR THERMOGRAPHIC ELECTRICAL INSPECTION | S | AGR | 13318.00 | 2419.00 | 40 | 0.00 | 1375.00 |
| 6 295 A00047 | | 100731 | SPONSOR BULK STOWAGE AREA | S | AGR | 0.00 | 0.00 | 0 | 0.00 | 0.00 |
| 6 295 A00048 | | 100112 | OVERBOARD DRAIN RUBBER BOOTS | S | AGR | 40102.00 | 33102.00 | 680 | 12645.00 | 0.00 |
| 6 295 A00049 | | 100114 | DECK EQUIPMENT COVERS | S | AGR | 1052.00 | 1052.00 | 24 | 0.00 | 452.00 |
| 6 295 A00050 | | 100307 | #2 SSTG CIRCULATING PUMP MOTOR OVERHAUL | S | AGR | 5637.00 | 3929.00 | 132 | 500.00 | 0.00 |
| 6 295 A00051 | | 100308 | #2 SSTG CONDENSATE PUMP MOTOR OVERHAUL | S | AGR | 5637.00 | 3929.00 | 132 | 500.00 | 0.00 |
| 6 295 A00052 | | 100309 | MAIN CIRCULATING PUMP MOTOR OVERHAUL | S | AGR | 5637.00 | 5629.00 | 200 | 500.00 | 0.00 |
| 6 295 A00053 | | 100310 | EDG SW BOOSTER PUMP MOTOR OVERHAUL | S | AGR | 6446.00 | 4934.00 | 180 | 350.00 | 0.00 |
| 6 295 A00054 | | 100525 | #2 SSTG CIRCULATING PUMP OVERHAUL | S | AGR | 18191.00 | 11503.00 | 272 | 3800.00 | 0.00 |
| 6 295 A00055 | | 100526 | #2 SSTG CONDESATE PUMP OVERHAUL | S | AGR | 17393.00 | 12741.00 | 272 | 3800.00 | 1000.00 |
| 6 295 A00056 | | 100527 | #2 SSTG AUXILIARY AIR ELECTOR CONDENSER INSPECTION | S | AGR | 7398.00 | 6579.00 | 45 | 25.00 | 5200.00 |
| 6 295 A00057 | | 100528 | SSTG AUXILIARY CONDENSER INSPECTION | S | AGR | 8815.00 | 8923.00 | 32 | 15.00 | 7060.00 |
| 6 295 A00058 | | 100529 | SSTG OVERHAUL | S | AGR | 77933.00 | 78974.00 | 1550 | 5000.00 | 26500.00 |
| 6 295 A00059 | | 100530 | IP BLEED VALVE | S | AGR | 19932.00 | 13500.00 | 268 | 5500.00 | 0.00 |
| 6 295 A00060 | | 100531 | AUX EXH PUMP VALVE | S | AGR | 19132.00 | 13500.00 | 267 | 5500.00 | 0.00 |
| 6 295 A00061 | | 100532 | MAIN CIRCULATING PUMP OVERHAUL | S | AGR | 143590.00 | 24805.00 | 585 | 7230.00 | 1000.00 |
| 6 295 A00062 | | 100533 | EDG SW BOOSTER PUMP OVERHAUL | S | AGR | 13593.00 | 12280.00 | 221 | 5000.00 | 500.00 |
| 6 295 A00063 | | 100610 | SAVIN COPIER INSPECTION AND REPAIR | C | AGR | 0.00 | 0.00 | 0 | 0.00 | 0.00 |
| 6 295 A00064 | | CDRL5 | CONTRACTS DATA REQUIREMENTS LIST | W | FPR | 0.00 | 0.00 | 0 | 0.00 | 0.00 |
| 6 295 A00065 | | 100113 | HULL EXPANSION JOINT REPAIRS | S | AGR | 25807.00 | 23529.00 | 852 | 1773.00 | 0.00 |
| 6 295 A00066 | | 100115 | MISCELLANEOUS | C | AGR | 581.00 | 0.00 | 0 | 0.00 | 0.00 |

| J N | S | A F | | | | | | | |
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| O U | T | G P | PROP | SETLD | SETLD | SETLD | SETLD | | |
| B M | A | R R | PRICE | PRICE | HOURS | MATL | SUB | | |
| TASK | WORK ITEM | DESCRIPTION | | | | | | | |
| | | PAINTING/PRESERVATION | | | | | | | |
| 6 295 A00067 | 100535 | BOILER FEED PUMP OVERHAUL | S AGR 41584.00 | 37063.00 | 700 | 11806.00 | 4000.00 | | |
| 6 295 A00068 | 100536 | BOW THRUSTER | S AGR 26597.00 | 24186.00 | 250 | 3650.00 | 8900.00 | | |
| 6 295 A00069 | 100102 | REPAIR WATERTIGHT DOORS | C AGR 21.00 | 0.00 | 0 | 0.00 | 0.00 | | |
| 6 295 A00070 | 100003 | GENERAL SERVICES FOR SHIP | S AGR 6709.00 | 4395.00 | 156 | 400.00 | 0.00 | | |
| 6 295 A00071 | 100019 | DELIVERY, CARE AND REDELIVERY OF SHIP | C AGR 3.00 | 0.00 | 0 | 0.00 | 0.00 | | |
| 6 295 A00072 | 100744 | S-BAND BTR UPGRADE | S AGR 26045.00 | 25252.00 | 660 | 3800.00 | 4268.00 | | |
| 6 295 A00073 | 100006 | NETWORK, SCHEDULES, AND PROGRESS REPORTS | W FPR 0.00 | 0.00 | 0 | 0.00 | 0.00 | | |
| 6 295 A00074 | 100003 | GENERAL SERVICES FOR THE SHIP | S AGR 20903.00 | 16230.00 | 149 | 4066.00 | 7419.00 | | |
| 6 295 A00075 | 100211 | ACC SYSTEM MODIFICATIONS | S AGR 276717.00 | 247000.00 | 1334 | 7000.00 | 184979.00 | | |
| 6 295 A00076 | 100203 | BOILER INSPECTION, TEST, AND REPAIR | S AGR 91132.00 | 90954.00 | 64 | 0.00 | 73501.00 | | |
| 6 295 A00077 | 100734 | ADP MODIFICATION | S AGR 20121.00 | 17990.00 | 555 | 3000.00 | 0.00 | | |
| 6 295 A00078 | 100735 | OCC UPGRADE | S AGR 177317.00 | 170109.00 | 4040 | 40000.00 | 18500.00 | | |
| 6 295 A00079 | 100602 | HABITABILITY UPGRADE | S AGR 31345.00 | 29782.00 | 776 | 8300.00 | 0.00 | | |
| 6 295 A00080 | 100752 | SPONSOR MACHINE SHOP RELOCATION | S AGR 338206.00 | 299995.00 | 6542 | 73594.00 | 38350.00 | | |
| 6 295 A00081 | 100754 | GPS REPLACEMENT | S AGR 11379.00 | 8601.00 | 216 | 1200.00 | 1700.00 | | |
| 6 295 A00082 | 100116 | STEERING GEAR ROOM ACCESS DOOR | S AGR 8870.00 | 8144.00 | 120 | 1075.00 | 3800.00 | | |
| 6 295 A00083 | 100021 | HAZARDOUS WASTE MANAGEMENT AND DISPOSAL | W AGR 0.00 | 0.00 | 0 | 0.00 | 0.00 | | |
| 6 295 A00084 | 100799 | PAINT SPECIFICATION FOR SPONSOR INSTRUMENTATION | W AGR 0.00 | 0.00 | 0 | 0.00 | 0.00 | | |
| 6 295 A00085 | 100910 | SEA VALVES AND OVERBOARD DISCHARGE VALVES, EXP JOIN | S AGR 49190.00 | 44002.00 | 1513 | 4979.00 | 0.00 | | |
| 6 295 A00086 | 100750 | RAKITE TIMING CABLES | S AGR 12976.00 | 11353.00 | 294 | 3200.00 | 0.00 | | |
| 6 295 A00087 | 100736 | INTRUSION ALARM SYSTEM | S AGR -1850.00 | -3163.00 | -114 | -250.00 | 0.00 | | |
| *** Total *** | | | | 2427887.00 | 1954819.00 | 37682 | 358102.00 | 489783.00 | |

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|--------|---|----------------------|--------------------|----------------|---------------------------|---|---|
| OI No. | TITLE | BASIC ITEM No. | DATE REC'D | DATE NEGOT. | DATE AUTH. TO PROD. | | |
| 01 | GENERAL SERVICES FOR SPONSOR | 007-01 | 6/20/91 | 10/25/91 | | | |
| 02 | STORAGE SPACE REPAIRS | 018-01 | 6/20/91 | 10/25/91 | | | |
| 03 | RBD AUDIO SYSTEM UPGRADE | 702-01 | 6/20/91 | 10/25/91 | | | |
| 04 | LOAD TEST MEASUREMENTS | 711-01 | 6/20/91 | 10/25/91 | | | |
| 05 | WSP-1 ANTENNA | 712-01 | 6/20/91 | 12/11/91 | | | |
| 06 | COMM VERTICAL WHIP ANTENNAS | 713-01 | 6/20/91 | 12/11/91 | | | |
| 07 | S-BAND PHASED ARRAY RADAR ANTENNA | 714-01 | 6/20/91 | 12/6/91 | | | |
| 08 | X-BAND RADAR ANTENNA MODST | 715-01 | 6/20/91 | | | | |
| 09 | OFFICE UPGRADES | 717-01 | 6/20/91 | 12/11/91 | | | |
| 10 | S/R & CONF RM CARPET CLING & REPLACEMENT | 719-01 | 6/20/91 | 10/25/91 | | | |
| 11 | LOG PERIODIC ANTENNA & ROTATOR | 724-01 | 6/20/91 | 12/6/91 | | | |
| 12 | EXERCISE ROOM UPGRADES | 726-01 | 6/20/91 | 10/12/91 | | | |
| 13 | SAVIO COPIER DISASSEMBLY/REPAIR | 727-01 | 6/20/91 | 12/3/91 | | | |
| 14 | PROTECTION OF ESME INSTRUMENTATION | 729-01 | 6/20/91 | 10/25/91 | | | |
| 15 | INSTR GAUGE, THERM, SENSOR & INDIC CALIB | 730-01 | 6/20/91 | 10/25/91 | | | |
| 16 | X-BAND HVAC UNIT, SERVICE/REPAIR | 732 | 6/20/91 | 11/26/91 | | | |
| 17 | CCC UPGRADES | 735 | 6/20/91 | | | | |
| 18 | INTRUSION ALARM SYSTEM | 736 | 6/20/91 | 10/25/91 | | | |
| 19 | HVAC/TWT COOLANT SYS STATUS MON | 748 | 6/20/91 | 10/25/91 | | | |
| 20 | DISINTEGRATOR INSPECTION & REPAIR | 723 | 6/20/91 | 11/26/91 | | | |
| 21 | SPONSOR BULK STORAGE AREA | 731 | 6/20/91 | | | | |
| 22 | EXPANSION JOINT REPAIRS | 201 | 6/20/91 | 10/25/91 | | | |
| 23 | STEPPY AROM INTERCOMMENTS | 720 | 6/25/91 | | | | |
| 24 | ASP MODIFICATION | 734 | 6/25/91 | 12/6/91 | | | |
| 25 | S-BAND TARGET FRAME AND HANDICAP | 737 | 6/25/91 | | | | |
| 26 | DATA STOREROOM VAULT DOOR | 738 | 6/25/91 | 8/30/91 | | | |
| 27 | MISSION COMM CENTER VAULT DOOR | 739 | 6/25/91 | 10/25/91 | | | |
| 28 | X-BAND BTR UPGRADE | 740 | 6/25/91 | 10/25/91 | | | |
| 29 | ENTERTAINMENT SYSTEM UPGRADE | 741 | 6/25/91 | 10/25/91 | | | |
| 30 | OKITE RECORDER UPGRADE | 742 | 6/25/91 | 11/26/91 | | | |
| 31 | OKITE TOPAZ POWER CONDITIONER | 743 | 6/25/91 | 11/26/91 | | | |
| 32 | A1 & A2 DISCONNECT SWITCH | 748 | 6/25/91 | 11/26/91 | | | |
| 33 | DOD HABITABILITY UPGRADE | 746 | 6/25/91 | 12/6/91 | | | |
| 34 | SPONSOR POWER & I/C ROOM UPGRADE | 747 | 6/25/91 | 10/25/91 | | | |
| 35 | SEA VALUES & OVER PRESS VALVES | 910-01 | 6/25/91 | | | | |
| 36 | ENGINE ROOM OUNDO PAINTING | 110 | 6/26/91 | 10/1 | | | |
| 37 | UNDERWATER HULL PASSORATION | 925 | 6/26/91 | 8/30/91 | | | |
| 38 | UNDERWATER HULL, COMPLETE REPAINT | 926 | 6/26/91 | 8/30/91 | | | |
| 39 | ANCHOR WINDLASS | 521 | 6/26/91 | 10/25/91 | | | |
| 40 | VARIOUS LAGGING & INSULATION REPAIRS | 609 | 6/26/91 | 10/25/91 | | | |

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ADMIN CHANGE - CANCELS WORK ITEM # 702

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| O.I. No. | TITLE | BASIC ITEM No. | DATE REC'D | DATE NEGOT. | DATE METH TO PROD. | | |
| 1 | 41. INTERIOR TILE & UNDERLAY REPLACEMENT | 605 | 6/26/91 | 10/22/91 | | 1 | |
| 2 | 42. ENGINE ROOM OVERHEAD PAINTING | 110-01 | 6/26/91 | 10/23/91 | | 2 | |
| 3 | 43. PORT & STBD CATESTAN OVAL | 522 | 7/02/91 | 10/23/91 | | 3 | |
| 4 | 44. AUX. EXHAUST MAKE-UP VALVE | 523 | 7/02/91 | 10/22/91 | | 4 | |
| 5 | 45. SPONSOR BULK STORAGE AREA | 707 | 7/02/91 | | | 5 | |
| 6 | 46. SPONSOR THERMORAPID ELECTRICAL TESTS | 733 | 7/10/91 | 11/24/91 | | 6 | |
| 7 | 47. SPONSOR BULK STORAGE AREA | 731-01 | 7/10/91 | 10/24/91 | | 7 | |
| 8 | 48. OVERBOARD DRAIN RUBBER BOOTS | 112 | 7/14/91 | 8/30/91 | | 8 | |
| 9 | 49. DECK EQUIPMENT COVERS | 114 | 7/16/91 | 8/30/91 | | 9 | |
| 10 | 50. #2 SSTG CIRC. PUMP MOTOR OVERHAUL | 307 | 7/16/91 | 8/30/91 | | 10 | |
| 11 | 51. #2 SSTG CONDENSATE PUMP MOTOR OVL | 308 | 7/16/91 | 8/30/91 | | 11 | |
| 12 | 52. MAID CIRC. PUMP MOTOR OVERHAUL | 309 | 7/16/91 | 8/30/91 | | 12 | |
| 13 | 53. EDG S/W BOOSTER PUMP MOTOR OVL | 310 | 7/16/91 | 10/22/91 | | 13 | |
| 14 | 54. #2 SSTG CIRC. PUMP OVERHAUL | 525 | 7/16/91 | 10/23/91 | | 14 | |
| 15 | 55. #2 SSTG CONDENSATE PUMP OVERHAUL | 526 | 7/16/91 | 10/23/91 | | 15 | |
| 16 | 56. #2 SSTG AUX AIR EXTRACTOR CONDENSER INSP | 527 | 7/16/91 | 10/22/91 | | 16 | |
| 17 | 57. #2 SSTG AUX CONDENSER INSPECTION | 528 | 7/16/91 | 10/22/91 | | 17 | |
| 18 | 58. #2 SSTG OVERHAUL | 529 | 7/16/91 | 10/23/91 | | 18 | |
| 19 | 59. IP BLEED VALVE | 530 | 7/16/91 | 12/14/91 | | 19 | |
| 20 | 60. AUX EXH PUMP VALVE | 531 | 7/16/91 | 12/14/91 | | 20 | |
| 21 | 61. MAID CIRC PUMP OVERHAUL | 532 | 7/16/91 | 10/25/91 | | 21 | |
| 22 | 62. EDG S/W BOOSTER PUMP OVERHAUL | 533 | 7/16/91 | 12/14/91 | | 22 | |
| 23 | 63. SAVID COPPER INSPECTION & REPAIR | 610 | 7/16/91 | | | 23 | |
| 24 | 64. CONTRACT DATA REPORT LIST (CDRL'S) | - | 7/18/91 | 01/20/92 | | 24 | |
| 25 | 65. HULL EXPANSION JOINT REPAIRS | 113 | 7/23/91 | 8/09/91 | | 25 | |
| 26 | 66. ANISO PAINTING/PROTECTION | 113 | 7/23/91 | | | 26 | |
| 27 | 67. BOILER FEED PUMP OVERHAUL | 535 | 7/23/91 | 10/23/91 | | 27 | |
| 28 | 68. BOW THRUSTER | 536 | 7/23/91 | 12/6/91 | | 28 | |
| 29 | 69. REPAIR WATER TIGHT DOORS | 102-1 | 7/23/91 | | | 29 | |
| 30 | 70. GENERAL SERVICES FOR SLIP | 003-01 | 7/23/91 | 10/11/91 | | 30 | |
| 31 | 71. DRAINAGE, CARGO & REINFORCEMENT OF SLIP | 019-01 | 7/23/91 | | | 31 | |
| 32 | 72. S-BAND BTR UPGRADE | 744 | 8/02/91 | 10/24/91 | | 32 | |
| 33 | 73. NETWORKS, SECURITY & PROTECTIVE REPORTS | 006-1 | 8/07/91 | | | 33 | |
| 34 | 74. GENERAL SERVICES FOR THE SLIP | 003-02 | 9/09/91 | 01/7/92 | | 34 | |
| 35 | 75. A.C.C. SYSTEM MONS | 211-1 | 9/12/91 | 10/27/91 | | 35 | |
| 36 | 76. BOILER INSPECTION, TEST & REPAIR | 203-1 | 10/25/91 | 12/14/91 | | 36 | |
| 37 | 77. ATP MODIFICATION | 734-1 | 10/25/91 | 12/6/91 | | 37 | |
| 38 | 78. OCC UPGRADE | 735-1 | 10/25/91 | 12/14/91 | | 38 | |
| 39 | 79. HABITABILITY UPGRADES | 609-1 | 10/25/91 | 01/7/92 | | 39 | |
| 40 | 80. SPONSOR MACHINE SHOP RELOCATION | 752 | 10/25/91 | 12/14/91 | | 40 | |

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CANCELLED PER NISPC LTR SER N101/2270/ET/11 OF 27 NOV '91

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|--------|--|------------------|---------------------|----------|---------|-----------|
| LI No. | TITLE | ITEM No. | Rev's | NEGOT. | AUTH TO | PROD. |
| 81. | GRS REPLACEMENT | 754 | 11/01/91 | 12/11/91 | | |
| 82. | STEERING GEAR ROOM ACCESS DOOR | 116 | 11/01/91 | 12/11/91 | | |
| 83. | AB SURVEY | 021-01 | 11/01/91 | 03/06/92 | | |
| 84. | PAINT SPOT FOR SPONSOR LETTERS | 719 | 12/01/91 | 02/11/92 | | CANCELLED |
| 85. | SEA VALVES & GUSD USED UNITS; exp. Joints | 910-2 | 12/01/91 | 12/06/91 | | |
| 86. | OAKITE TIMING CABLE | 750 | 12/09/91 | 01/17/92 | | |
| 87. | INTRUSION ALARM SYS. | 736-01 | 12/09/91 | 01/13/92 | | |
| 88. | SPODSOL MACH SHOP RELOCATION | 752-01 | 01/14/92 | 01/30/92 | | |
| 89. | EMPTY, CLOUD & GAS FREE TANKS | 109-1 | 01/14/92 | 01/22/92 | | |
| 90. | SEA VALVES FOR SHIP - AL (CD) VALVES | 003-2 | 01/01/92 | | | |
| 91. | BOILER CONTROL SYSTEM TRAINING | 211-2 | 01/14/92 | 02/24/92 | | |
| 92. | FIREMAIN ISOLATION VALVES | 504-1 | 01/14/92 | 01/02/92 | | |
| 93. | OUL (3) SSTG LUBE OIL PUMPS | 529-1 | 01/14/92 | 01/24/92 | | |
| 94. | VARIOUS OUL REPAIRS | 504 | 01/14/92 | | | |
| 95. | STEERING GEAR SYSTEM REPLACEMENT | 511-01 | 01/15/92 | 01/27/92 | | |
| 96. | HOUSING OF CUMMINS & WILCOX PUMPS | 019 | 01/15/92 | | | |
| 97. | FREEBOARD PRESERVATION | 927 | 01/15/92 | 01/14/92 | | |
| 98. | HULL ZINC ANODE RENEWAL | 920-01 | 01/20/92 | 01/24/92 | | |
| 99. | EDG SW BOOSTER PUMP FAN | 533-1 | 01/20/92 | 01/22/92 | | |
| 100. | RUDDER REPAIRS | 907-1 | 01/20/92 | 01/24/92 | | |
| 101. | SEA VALVES; ADDITIONAL exp. JOINTS | 910-3 | 01/20/92 | 01/27/92 | | |
| 102. | STEERING GEAR SYSTEM REPLACEMENT | 511-02 | 01/20/92 | 01/30/92 | | |
| 103. | STEERING GEAR SYSTEM REPLACEMENT | 511-03 | 01/20/92 | 01/21/92 | | |
| 104. | #2 SSTG OVERHAUL | 529-02 | 01/20/92 | 01/27/92 | | |
| 105. | DECK, CAB & LATERALITY OF SHIP | 019-02 | 01/20/92 | 01/22/92 | | |
| 106. | BOW THRUSTER | 536-01 | 01/20/92 | 01/27/92 | | |
| 107. | NON-RETURN VALVES | 919-1 | 01/20/92 | 01/27/92 | | |
| 108. | SEA VALVES - BUSH OVER | 910-4 | 01/20/92 | 01/27/92 | | |
| 109. | SEA VALVES - BLOWDOWN PIPING | 910-5 | 01/20/92 | 01/27/92 | | |
| 110. | BOILER INSPECTION, TEST, ETC | 203-2 | 01/20/92 | 01/24/92 | | |
| 111. | OCC UPGRADE | 735-02 | 01/20/92 | 02/04/92 | | |
| 112. | UNDERWATER HULL PRESERVATION | 923-02 | 01/20/92 | 01/30/92 | | |
| 113. | HABITABILITY UPGRADE | 608-02 | 01/20/92 | 01/27/92 | | |
| 114. | #2 SSTG CIRC PUMP | 525-01 | 01/20/92 | 02/04/92 | | |
| 115. | GRS REPLACEMENT | 754-01 | 01/20/92 | 01/30/92 | | |
| 116. | ADDER WINDLASS (ROTSSOL 2/5/92) | 521-1 | 01/20/92 | | | |
| 117. | EMPTY, CLOUD & GAS FREE TANKS | 109-02 | 01/20/92 | 01/27/92 | | |
| 118. | ADP MODIFICATIONS | 734-02 | 01/22/92 | 02/03/92 | | |
| 119. | TANK VENT GOOSENECKS | 101-01 | 01/22/92 | 01/30/92 | | |
| 120. | OCC UPGRADE | 735-03 | 01/22/92 | 01/30/92 | | |

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10 cancelled by also LTR UNSERIALIZED OF JAN 27, 1992

14 cancelled by also LTR UNSERIALIZED OF JAN 27, 1992

16 cancelled by also LTR UNSERIALIZED OF JAN 27, 1992

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| DI No. | TITLE | | | BASIC | ITEM | DATE | DATE | DATE | DATE | DATE | DATE | DATE | DATE | DATE | DATE | DATE | DATE | DATE | DATE | DATE | DATE |
| | | | | No. | Rev'd | NEGOT | ASMT. TO | PROD. | | | | | | | | | | | | | |
| 1 | 121. | X-BAND RADAR ANTENNA MOUNT | | 715-02 | 01/22/92 | 01/30/92 | | | | | | | | | | | | | | | |
| 2 | 122. | J/R & CONF. ROOM CARPET CLEANING | | 719-02 | 01/23/92 | 01/30/92 | | | | | | | | | | | | | | | |
| 3 | 123. | BOAT THRUSTER | | 536-02 | 01/23/92 | 01/30/92 | | | | | | | | | | | | | | | |
| 4 | 124. | ANCHOR & CHAINS | | 909-1 | 02/12/92 | 02/18/92 | | | | | | | | | | | | | | | |
| 5 | 125. | GENERAL SERVICES FOR SHIP | | 902-01 | 01/23/92 | 01/30/92 | | | | | | | | | | | | | | | |
| 6 | 126. | EMPTY, CLOUD & GAS FREE TANKS | | 109-03 | 01/23/92 | 01/30/92 | | | | | | | | | | | | | | | |
| 7 | 127. | PROPELLER SHAFT TIEP & BAG RENEWAL | | 928-01 | 01/24/92 | 01/30/92 | | | | | | | | | | | | | | | |
| 8 | 128. | MAIN CIRC PUMP MOTOR | | 309-01 | 01/23/92 | 01/27/92 | | | | | | | | | | | | | | | |
| 9 | 129. | DAKITE SAFE REPAIR | | 725-01 | 01/24/92 | 02/03/92 | | | | | | | | | | | | | | | |
| 10 | 130. | SAFE INSTALLATION & REPAIR | | 716-01 | 01/24/92 | 02/03/92 | | | | | | | | | | | | | | | |
| 11 | 131. | #2 SSTG OVERHAUL | | 529-03 | 01/27/92 | 02/03/92 | | | | | | | | | | | | | | | |
| 12 | 132. | #2 SSTG CONDENSATE PUMP MOTOR | | 308-01 | 01/24/92 | 01/27/92 | | | | | | | | | | | | | | | |
| 13 | 133. | #2 SSTG CIRC PUMP MOTOR | | 307-01 | 01/24/92 | 01/30/92 | | | | | | | | | | | | | | | |
| 14 | 134. | SEA VALVES - DULL PENETRATION | | 910-06 | 01/24/92 | 01/30/92 | | | | | | | | | | | | | | | |
| 15 | 135. | LIFEBOAT ROBERTIFICATION | | 602-1 | 01/28/92 | 02/14/92 | | | | | | | | | | | | | | | |
| 16 | 136. | BOILER REPAIRS | | 203-3 | 01/28/92 | 02/06/92 | | | | | | | | | | | | | | | |
| 17 | 137. | BOAT WINCH & DAVIT | | 603-1 | 01/29/92 | 02/04/92 | - | | | | | | | | | | | | | | |
| 18 | 138. | GAGE & THERMOMETER CALIB. | | 502-1 | 01/29/92 | 01/30/92 | | | | | | | | | | | | | | | |
| 19 | 139. | PROPELLER TAILSHaft TIEP & BAG RENEWAL | | 928-02 | 01/29/92 | 02/10/92 | | | | | | | | | | | | | | | |
| 20 | 140. | W/T DOORS | | 102-2 | 01/29/92 | 02/10/92 | - | | | | | | | | | | | | | | |
| 21 | 141. | BOAT THRUSTER | | 536-3 | 01/29/92 | | | | | | | | | | | | | | | | |
| 22 | 142. | "TOMARSAT" INSTALLATION | | 452 | 01/29/92 | 02/27/92 | | | | | | | | | | | | | | | |
| 23 | 143. | DECK EQUIP. COVERS | | 114-1 | 01/30/92 | 02/10/92 | - | | | | | | | | | | | | | | |
| 24 | 144. | SAFE INSTALLATION & REPAIR | | 716-2 | 01/30/92 | 02/10/92 | - | | | | | | | | | | | | | | |
| 25 | 145. | BOAT WINCH & DAVIT | | 603-2 | 01/30/92 | 02/10/92 | - | | | | | | | | | | | | | | |
| 26 | 146. | BOAT WINCH & DAVITS | | 603-3 | 01/29/92 | 02/06/92 | - | | | | | | | | | | | | | | |
| 27 | 147. | ACC. SYSTEM - BURNER FRONT F.I.T. UP | | 211-3 | 01/30/92 | 02/14/92 | | | | | | | | | | | | | | | |
| 28 | 148. | SPA TANK OUTLET STRAINER | | 204-1 | 02/02/92 | 02/14/92 | | | | | | | | | | | | | | | |
| 29 | 149. | OFFICE UPGRADE | | 717-1 | 01/30/92 | 02/03/92 | | | | | | | | | | | | | | | |
| 30 | 150. | WSE-1 ANTENNAS | | 712-2 | 01/30/92 | 02/10/92 | - | | | | | | | | | | | | | | |
| 31 | 151. | ADP MODIFICATION | | 734-3 | 01/30/92 | 02/10/92 | - | | | | | | | | | | | | | | |
| 32 | 152. | ENGINE ROOM OVERBOARD PAINTING | | 110-3 | 02/03/92 | 02/10/92 | - | | | | | | | | | | | | | | |
| 33 | 153. | DAVID COPPER TIEP & REPAIR | | 727-2 | 02/03/92 | 02/04/92 | - | | | | | | | | | | | | | | |
| 34 | 154. | INSPECTION OF FIRE HOSES | | 504-2 | 02/03/92 | 02/10/92 | - | | | | | | | | | | | | | | |
| 35 | 155. | INSPECTION OF #1 & #2 DISTRIBUTORS | | 606-1 | 02/03/92 | 02/10/92 | - | | | | | | | | | | | | | | |
| 36 | 156. | BOAT WINCH & DAVIT | | 603-4 | 02/14/92 | 03/05/92 | | | | | | | | | | | | | | | |
| 37 | 157. | ANCHORS & CHAINS | | 909-2 | 2/4/92 | 02/04/92 | - | | | | | | | | | | | | | | |
| 38 | 158. | #2 SSTG AIR EJECTOR CONDENSATE | | 527-1 | 2/4/92 | 02/14/92 | | | | | | | | | | | | | | | |
| 39 | 159. | FOOD PUMP PIPES | | 535-1 | 2/11/92 | | | | | | | | | | | | | | | | |
| 40 | 160. | HULL GAUGING | | 103-1 | 02/03/92 | 03/06/92 | | | | | | | | | | | | | | | |

| | | 1 | | 2 | | 3 | | 4 | | 5 | | 6 | |
|--------|--|----------------------|---------------------|---------------------|--------------------------|---|--|---|--|---|--|---|----|
| QI No. | TITLE | BASIC ITEM No. | DATE REQ'D | DATE NOTED | DATE AUTH TO PROD. | | | | | | | | |
| 1 | 161. E/R OIL PAINTING | 110-4 | 02/03/92 | 02/11/92 | | | | | | | | | 1 |
| 2 | 162. MSD PUMPS OVERHAUL | 506-1 | 02/03/92 | 02/10/92 | | | | | | | | | 2 |
| 3 | 163. BOAT WINDLASS | 500-4 | 02/04/92 | 02/10/92 | | | | | | | | | 3 |
| 4 | 164. BOAT WINCH & DAVIT | 603-5 | 02/04/92 | 02/10/92 | | | | | | | | | 4 |
| 5 | 165. X-BAND RADAR ANTENNA MOUNT | 715-3 | 02/04/92 | 02/18/92 | | | | | | | | | 5 |
| 6 | 166. X-BAND NUAC UNIT SERVICE & REPAIR | 732-1 | 02/04/92 | 02/10/92 | | | | | | | | | 6 |
| 7 | 167. RAD AUDIO SYSTEM UPGRADE | 702-2 | 02/04/92 | 02/18/92 | | | | | | | | | 7 |
| 8 | 168. #2 SSTG OVERHAUL | 529-4 | 02/05/92 | 02/11/92 | | | | | | | | | 8 |
| 9 | 169. #2 SSTG AUX CONDENSER | 528-1 | 02/05/92 | 02/11/92 | | | | | | | | | 9 |
| 10 | 170. SPONSOR MACH. STOP RELOCATION | 752-2 | 02/07/92 | 02/10/92 | | | | | | | | | 10 |
| 11 | 171. ADDED WINDLASS | 521-2 | 02/08/92 | 02/10/92 | | | | | | | | | 11 |
| 12 | 172. FIRE DAMPERS | 801-1 | 02/14/92 | 02/27/92 | | | | | | | | | 12 |
| 13 | 173. EXPANSION JOINT BACKING RING | 910-7 | 02/07/92 | 02/10/92 | | | | | | | | | 13 |
| 14 | 174. AEC SYSTEM REFRACTORY REPAIR | 211-4 | 02/07/92 | 02/14/92 | | | | | | | | | 14 |
| 15 | 175. S-BAND PHASED ARRAY RADAR ANTENNA | 704-2 | 02/07/92 | 02/18/92 | | | | | | | | | 15 |
| 16 | 176. 4/5 CAPSTAN OVERHAUL | 522-1 | 02/04/92 | 02/10/92 | | | | | | | | | 16 |
| 17 | 177. #177 NOT TO BE USED | - | - | - | | | | | | | | | 17 |
| 18 | 178. SAFE INSTALLATION & REPAIR | 716-3 | 02/10/92 | 02/18/92 | | | | | | | | | 18 |
| 19 | 179. SEA VALVES | 910-8 | 02/11/92 | 03/06/92 | | | | | | | | | 19 |
| 20 | 180. CAPSTANS | 522-2 | 02/10/92 | 02/18/92 | | | | | | | | | 20 |
| 21 | 181. STERNAL ROOM OPERATOR | 726-1 | 02/10/92 | 02/10/92 | | | | | | | | | 21 |
| 22 | 182. REPLACEMENT PART PROCUREMENT | 121-1 | 02/11/92 | 03/04/92 | | | | | | | | | 22 |
| 23 | 183. #2 SSTG. L.O. PUMPS | 529-5 | 02/11/92 | 02/18/92 | | | | | | | | | 23 |
| 24 | 184. AEC SYSTEM, REMOTE WATER LVL. INDIC'S | 211-5 | 02/12/92 | 02/20/92 | | | | | | | | | 24 |
| 25 | 185. STEERING GEAR REPLACEMENT | 571-4 | 02/12/92 | 2/18/92 | | | | | | | | | 25 |
| 26 | 186. BOILER EXPANSION JOINT | 201-1 | 02/12/92 | 02/18/92 | | | | | | | | | 26 |
| 27 | 187. STEERING GEAR REPLACEMENT | 571-5 | 02/12/92 | 02/21/92 | | | | | | | | | 27 |
| 28 | 188. DISINTEGRATOR REPAIRS | 710-1 | 02/13/92 | 2/18/92 | | | | | | | | | 28 |
| 29 | 189. SCUMPER/ SOIL DRAIN VALVES | 921-1 | 02/14/92 | 02/18/92 | | | | | | | | | 29 |
| 30 | 190. MAGNETIC COMPASS CALIB | 463 | 02/14/92 | 2/18/92 | | | | | | | | | 30 |
| 31 | 191. STEERING GEAR REPLACEMENT | 511-6 | 02/20/92 | 2/25/92 | | | | | | | | | 31 |
| 32 | 192. BOAT WINCH & DAVIT | 603-6 | 02/14/92 | 02/18/92 | | | | | | | | | 32 |
| 33 | 193. REPLACEMENT PART PROGRAM | 121-2 | 02/12/92 | 02/27/92 | | | | | | | | | 33 |
| 34 | 194. GENERAL ALARM | 301-7 | 02/14/92 | 02/25/92 | | | | | | | | | 34 |
| 35 | 195. ADDED WINDLASS | 521-3 | 02/14/92 | 02/18/92 | | | | | | | | | 35 |
| 36 | 196. #196 NOT TO BE USED | - | - | - | | | | | | | | | 36 |
| 37 | 197. ADDED WINDLASS | 521-4 | 02/18/92 | 02/19/92 | | | | | | | | | 37 |
| 38 | 198. PORT/STAR CAPSTANS | 522-3 | 02/18/92 | 02/20/92 | | | | | | | | | 38 |
| 39 | 199. S-BAND BTR UPGRADE | 744-1 | 02/18/92 | 02/25/92 | | | | | | | | | 39 |
| 40 | 200. MSC SAVID COPIER TSP'S | 610-1 | 02/18/92 | 02/27/92 | | | | | | | | | 40 |

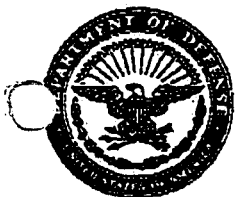
| | | 1 | 2 | 3 | 4 | 5 | 6 |
|--------|--|------------------|-----|---------------------|----------|------|-----------|
| OI No. | TITLE | Basic | | DATE | DATE | DATE | DATE |
| | | Item | No. | | | | |
| | | | | Rec'd | NGEOT | | Actual to |
| | | | | | | | Prod |
| 1 | 201. X-BAND MAINT. AREA | 760-1 | | 02/18/92 | 02/20/92 | | |
| 2 | 202. OAKITE TOPAZ POWER CONDITIONER | 743-1 | | 02/18/92 | 02/20/92 | | |
| 3 | 203. OAKITE RECORDER UPGRADE | 742-1 | | 02/18/92 | 02/25/92 | | |
| 4 | 204. X-BAND HULL LOGGERS | 761-1 | | 02/18/92 | 02/27/92 | | |
| 5 | 205. TELEPHONE SYSTEM UPGRADE | 755-1 | | 02/21/92 | | | |
| 6 | 206. ACC SYSTEM | 211-6 | | 02/21/92 | 03/01/92 | | |
| 7 | 207. AUX STEAM RELIEF VALVES | 572-1 | | 02/18/92 | 02/25/92 | | |
| 8 | 208. INTERIOR TILE & UNDERLAY | 605-2 | | 02/18/92 | 02/25/92 | | |
| 9 | 209. LIFEBOAT ROBERT'S | 602-2 | | 02/18/92 | 02/27/92 | | |
| 10 | 210. REPLACEMENT PARTS PROCUREMENT | 121-3 | | 02/18/92 | 02/25/92 | | |
| 11 | 211. X-BAND BTR UPGRADE | 740-1 | | 02/18/92 | 02/20/92 | | |
| 12 | 212. AB SURVEY & HANDLING | 021-2 | | 02/20/92 | 03/06/92 | | |
| 13 | 213. LOAD TEST MEASUREMENTS | 711-2 | | 03/03/92 | 03/06/92 | | |
| 14 | 214. HAZARDOUS WASTE | 021-3 | | 02/20/92 | | | |
| 15 | 215. BOAT DAVIT & WINCH | 603-7 | | 02/20/92 | 03/06/92 | | |
| 16 | 216. OAKITE TOPAZ POWER CONDITIONER | 743-2 | | 02/21/92 | 02/24/92 | | |
| 17 | 217. ACC SYSTEM | 211-7 | | 02/21/92 | | | |
| 18 | 218. I.P. BLEED VALVE | 530-1 | | 02/21/92 | 02/27/92 | | |
| 19 | 219. AUX EXHAUST DUMP VALVE | 531-1 | | 02/21/92 | 02/27/92 | | |
| 20 | 220. REPLACEMENT PARTS PROCUREMENT | 01211-4 | | 02/20/92 | 03/04/92 | | |
| 21 | 221. HABITABILITY UPGRADE | 608-3 | | 02/20/92 | 03/05/92 | | |
| 22 | 222. SPONSOR MACH SHOP RENOVATION | 752-3 | | 02/20/92 | 03/05/92 | | |
| 23 | 223. SPONSOR MACH SHOP RENOVATION | 752-4 | | 02/20/92 | 02/27/92 | | |
| 24 | 224. GRS REPLACEMENT | 754-2 | | 03/05/92 | 03/06/92 | | |
| 25 | 225. REPLACEMENT PARTS | 121-5 | | 02/25/92 | 03/04/92 | | |
| 26 | 226. INTERIOR TILE & UNDERLAYMENT | 605-4 | | 02/25/92 | 03/05/92 | | |
| 27 | 227. TRANS AIR HANDLING | 787-1 | | 02/25/92 | | | |
| 28 | 228. HULL EXPANSION JOINT REPAIRS | 113-1 | | 02/25/92 | 03/05/92 | | |
| 29 | 229. FUEL UNREP | 1001 | | 02/25/92 | 03/05/92 | | |
| 30 | 230. CABLE UNREP | 1002 | | 02/25/92 | 03/05/92 | | |
| 31 | 231. REPLACEMENT PARTS PROCUREMENT | 121-6 | | 02/26/92 | 02/27/92 | | |
| 32 | 232. FIRE HOSES | 504-3 | | 02/26/92 | 03/06/92 | | |
| 33 | 233. FIXED & PORTABLE FIRE EXTING. SYS | 503-1 | | 02/26/92 | 03/06/92 | | |
| 34 | 234. ANCHOR WINDLASS | 521-5 | | 02/26/92 | 03/09/92 | | |
| 35 | 235. ACC SYSTEM, FDR CABLES | 211-8 | | 02/26/92 | 03/06/92 | | |
| 36 | 236. ELEVATOR CERTIFICATION | 611 | | 02/26/92 | 03/06/92 | | |
| 37 | 237. CRANE REPLACEMENT | 551 | | 02/26/92 | 03/09/92 | | |
| 38 | 238. ACC SYS - STEAM JUNCTIONING PIPING | 211-9 | | 02/27/92 | 03/03/92 | | |
| 39 | 239. AHEAD TEMPERATURE ALARM | 302-1 | | 02/28/92 | 03/12/92 | | |
| 40 | 240. HVAC/TWT STATUS MONS | 744-1 | | 03/03/92 | 03/06/92 | | |

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| | Initials | Date |
| Prepared By | | |
| Approved By | | |

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| OI No | TITLE | BASIC | | DATE | | DATE | | DATE | | DATE | | DATE | |
| | | ITEM | Nb. | RECD | NEGOT. | DATE | NEGOT. | DATE | NEGOT. | DATE | NEGOT. | DATE | NEGOT. |
| 241 | W/T. DOORS | 102-3 | | 03/03/92 | 03/06/92 | | | | | | | | |
| 242 | ANCHOR WINDLASS | 521-6 | | 03/03/92 | 03/05/92 | | | | | | | | |
| 243 | #2 SSTG OVERHAUL | 529-6 | | 03/03/92 | 03/05/92 | | | | | | | | |
| 244 | ACC SYSTEM - CONTROL AIR WASS | 211-10 | | 03/03/92 | 03/12/92 | | | | | | | | |
| 245 | OAKITE TOPAZ POWER CONDITIONER | 743-3 | | 03/03/92 | 03/06/92 | | | | | | | | |
| 246 | ACC STRUCTURAL WOODS | 211-11 | | 03/03/92 | | | | | | | | | |
| 247 | D/A TANK | 204-2 | | 03/03/92 | 03/02/92 | | | | | | | | |
| 248 | FIXED & PORTABLE FIRE EXTING. | 203-2 | | 03/03/92 | 03/12/92 | | | | | | | | |
| 249 | PORT/STAB CAPSTAN | 522-4 | | 03/03/92 | 03/05/92 | | | | | | | | |
| 250 | FIREWATER ISOLATION VALVES | 201-4 | | 03/03/92 | | | | | | | | | |
| 251 | | | | | | | | | | | | | |
| 252 | OAKITE TOPAZ XFER | 743-4 | | 03/03/92 | 03/06/92 | | | | | | | | |
| 253 | LIFEBOAT RECERTIFICATION | 602-3 | | 03/03/92 | 03/04/92 | | | | | | | | |
| 254 | ANCHOR WINDLASS | 521-7 | | 03/03/92 | 03/06/92 | | | | | | | | |
| 255 | GENERAL SERVICES FOR SPONSOR | 007-2 | | 03/05/92 | 03/06/92 | | | | | | | | |
| 256 | INTERIOR TILE & UNDERLAY | 605-5 | | 03/05/92 | 03/24/92 | | | | | | | | |
| 257 | ADP MODIFICATION | 734-4 | | 03/05/92 | 03/06/92 | | | | | | | | |
| 258 | ACC SYSTEM - STRUCTURAL WDD #3 | 211-12 | | 03/05/92 | 03/06/92 | | | | | | | | |
| 259 | | | | | | | | | | | | | |
| 260 | ACC SYSTEM - LP AIR COMP | 211-13 | | 03/05/92 | 03/06/92 | | | | | | | | |
| 261 | SWED CLNG - GROUND DETECTORS | 204-4 | | 03/09/92 | 03/12/92 | | | | | | | | |
| 262 | REPLACEMENT PARTS - BOATS | 021-8 | | 03/09/92 | 03/12/92 | | | | | | | | |
| 263 | LIFEBOAT RECERTIFICATION | 602-4 | | 03/09/92 | 03/12/92 | | | | | | | | |
| 264 | GROUNDING CABLE | 762 | | 03/09/92 | 03/12/92 | | | | | | | | |
| 265 | HAZARDOUS WASTE | 021-4 | | 03/10/92 | | | | | | | | | |
| 266 | SAVING CORRIDOR JUMP & REPAIR | 610-2 | | 03/10/92 | 03/12/92 | | | | | | | | |
| 267 | ACC SYSTEM - LDP REPLACEMENT | 211-14 | | 03/11/92 | 03/12/92 | | | | | | | | |
| 268 | FIXED & PORTABLE FIRE EXTING SYSTEM | 203-3 | | 03/10/92 | 03/19/92 | | | | | | | | |
| 269 | BOILER REPAIRS - FUEL TUBE ROLL | 203-1 | | 03/11/92 | 03/12/92 | | | | | | | | |
| 270 | #3 HVAR PLANT Pump Motor | 321 | | 03/12/92 | 03/19/92 | | | | | | | | |
| 271 | SPONSOR MACHINE SHOP RELOCATION | 752-5 | | 03/13/92 | | | | | | | | | |
| 272 | ACC SYSTEM - YARDWAY OFF-STICKERS | 211-15 | | 03/13/92 | | | | | | | | | |
| 273 | STEERING GEAR REPLACEMENT | 511-7 | | 03/13/92 | 03/19/92 | | | | | | | | |
| 274 | AUX EXHAUST MAKE-UP VALVE | 523-1 | | 03/13/92 | 03/19/92 | | | | | | | | |
| 275 | STEERING GEAR REPLACEMENT | 511-08 | | 03/17/92 | 03/24/92 | | | | | | | | |
| 276 | ACC SYSTEM, AIR COCK PIPING | 211-16 | | 03/13/92 | 03/19/92 | | | | | | | | |
| 277 | | | | | | | | | | | | | |
| 278 | OVERBOARD RUBBER BOOTS | 112-1 | | 03/13/92 | | | | | | | | | |
| 279 | S-BAND PHASED ARRAY RADAR | 714-3 | | 03/17/92 | 03/19/92 | | | | | | | | |
| 280 | SPONSOR MACHINE SHOP RELOCATIONS | 752-1a | | 03/17/92 | 03/19/92 | | | | | | | | |

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| | Initials | Date |
| Prepared By | | |
| Approved By | | |

| | | | Basic | | | | DATE | |
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| | | | ITEM | | DATE | | DATE | |
| QI NO. | TITLE | | No. | Rec'd | NEGOT. | | Auth To | |
| | | | | | | | PROD. | |
| 261. | ACE SYSTEM- SPARE PARTS | | 211-17 | 03/19/92 | | | | |
| 262. | REPLACEMENT PARTS (ITEM 602) | | 121-9 | 03/19/92 | | | | |
| 263. | FUEL UNREP INSTALLATION | | 117-1 | 03/24/92 | | | | |
| 264. | REPLACEMENT PARTS INCURMENT | | 0121-9 | 03/23/92 | | | | |
| 265. | Gen. SERVICES FOR SPANOR | | 007-02 | 04/02/92 | 04/07/92 | | | |
| 266. | S-BAND PHASED ARRAY RADAR | | 714-4 | 03/24/92 | | | | |
| 267. | REINSTATE CDRL'S | | - | 03/25/92 | | | | |
| 268. | REPLACEMENT PARTS | | 021-11 | 03/26/92 | | | | |
| 269. | LIFEBOAT, REPORT | | 602-5 | 03/26/92 | 04/07/92 | | | |
| 270. | | | | | | | | |
| 271. | | | | | | | | |
| 272. | | | | | | | | |
| 273. | MAGNETIC COMPASS | | 453-1 | 03/30/92 | | | | |
| 274. | REPLACEMENT PARTS | | 0121-13 | 03/31/92 | | | | |
| 275. | LIFEBOAT, RECERTIFICATION | | 602-6 | 03/31/92 | | | | |
| 276. | REPLACEMENT PARTS | | 0121-14 | 04/01/92 | | | | |
| 277. | CARGO UNREP | | 118-1 | 03/30/92 | | | | |
| 278. | CDS Repair | | 709-1 | 04/02/92 | | | | |
| 279. | FUEL UNREP | | 117-2 | 04/03/92 | 04/07/92 | | | |
| 300. | STEERING GEAR REPLACEMENT | | 511-9 | 04/03/92 | 04/07/92 | | | |
| 301. | | | | | | | | |
| 302. | CRANE REPLACEMENT | | 551-1 | 04/04/92 | | | | |
| 303. | | | | | | | | |
| 304. | DOCK/SEA TRIAL COSTS | | 020-1 | 04/07/92 | | | | |
| 305. | | | | | | | | |
| 306. | | | | | | | | |
| 307. | Gen. SERVICES FOR JMS (CARGO CLO'S) | | 003-3 | 04/07/92 | | | | |
| 308. | AEROMOTOR INSTALLATION | | 703-1 | 04/17/92 | | | | |
| 309. | SIDS INSTALLATION | | 728-1 | 04/17/92 | | | | |



DEPARTMENT OF THE NAVY

MILITARY SEALIFT COMMAND, PACIFIC
OAKLAND, CALIFORNIA 94625-5010

IN REPLY REFER TO:

4200
Ser N101/2278/ET/jjp
27 November 1991

Southwest Marine, Inc.
Foot of Sampson Street
P. O. Box 13308
San Diego, CA 92113-0308
Attn: Ralph Orozco

Subj: USNS OBSERVATION ISLAND (T-AGM 23) CONTRACT
N00033-91-C-3142

Dear Mr. Orozco:

The following represents a recap of negotiations conducted 26 November 1991 at Military Sealift Command, Pacific (MSCPAC), and RFP's settled.

| <u>RFP/ITEM</u> | <u>STATUS</u> |
|-----------------|---------------------------------------|
| 016/732-01 | Settled X-BAND AUCB, SERVICE/REPAIR |
| 020/723 | Settled DISINTEGRATOR, INSPECT/REPAIR |
| 031/743 | Settled OKITE TOPAZ AIR CONDITIONER |
| * 030/743 | Settled OKITE RECORDER UPGRADE |
| * 032/745 | Settled A. #12 DISCONNECT STARTER |
| 046/733 | Settled SPONSOR THOMAS GRAPHIC SURVEY |
| 045/749 | Cancelled SPONSOR BOCK STORNSO ALON |
| 008/715-01 | Cancelled X-BAND RADAR ANTENNA MOUNT |

The settled RFP's will be finalized into a modification based on negotiated hours and amounts.

Negotiations are next scheduled for 6 December 1991 at MSCPAC. In preparation for this negotiation, the following RFP's require submission of Southwest Marine quotations.

| <u>RFP/ITEM</u> | <u>RFP/ITEM</u> | <u>RFP/ITEM</u> |
|-----------------|-----------------|-----------------|
| 009/717-01 | 068/536 | 079/608-01 |
| 017/735 | 073/006-01 | 080/752 |
| 024/734 | 076/203-01 | 081/754 |
| 064 | 077/734-01 | 082/116 |
| 066/115 | 078/735-01 | 083/021-01 |

Please provide the above quotes, to include any subcontractor breakdowns prior to your arrival on 6 December 1991. You may FAX them in and bring originals with you or if you desire you can Federal Express them.

During our meeting on 26 November 1991 the following items were also discussed.

* WORKING DWG'S READ.
* UPDATE SUBJECTS RECORDS

NWMAR130669

4200

Ser N101/2278/ET/jjp

27 November 1991

Subj: USNS OBSERVATION ISLAND (T-AGM 23) CONTRACT
N00033-91-C-3142

- a. Item 799 will be assigned an RFP number and passed on to you for quote.
- b. RFP's 005 and 006 are being held in abeyance until Item 799 is issued. RFP's 005 and 006 will then be quoted "0" change.
- c. RFP 077 will be revised to include new specifications for Item 734, which will cancel RFP 024/734.
- d. Modification P00007, RFP 015, reflected an incorrect amount charged to labor of \$1,800. The correct charge should have been \$1,000 and, this will be corrected on the next modification.
- e. RFP's 007 and 011 were to be checked by you to determine/reflect the proper credit to the Government for cancelling the items and issuing new work items.
- f. You are to provide a new quote for RFP 074/003.

Gov Sues For Stop. (Skipper's costs).

Please review the above and let me know if there are any questions or disagreement.

Sincerely,


ERNEST F. TAYLOR
Contracting Officer

Copy to:
MSCPAC N713 - Pete Feeney
COMSC N102d

| <u>MOD No.</u> | <u>TITLE</u> | <u>DATE Rec'd @ SONA</u> |
|----------------|--|--------------------------|
| 009/717-01 | OFFICE UPGRADE | JUNE 20, 1991 |
| 017/735 | OCC UPGRADE | JUNE 20, 1991 |
| 024/734 | ADP MODIFICATION (TO BE CANCELLED) | 6/25/91 ? |
| 064 | CDRL'S | JULY 18, 1991 |
| 066/115 | MISC PRINTING/PRESERVATION | JULY 23, 1991 |
| 068/536 | BOILER TRANSFER | JULY 23, 1991 |
| 073/006-01 | NETWORKS, SCHEDULES & PROGRESS REPORTS | AUG 07, 1991 |
| 076/203-01 | BOILER INSPECTION, TEST & REPAIR | OCT 25, 1991 |
| 077/734-01 | ADP MODIFICATION (TO BE REVISED) | OCT 25, 1991 |
| 078/735-01 | OCC UPGRADE | OCT 25, 1991 |
| 079/608-01 | HABITABILITY UPGRADE | OCT 25, 1991 |
| 080/752 | SPONSOR MACHINES SPOF ALLOCATION | OCT 25, 1991 |
| 081/754 | GPS REPLACEMENT | NOV 01, 1991 |
| 082/116 | STEERING GEAR ROOM ACCESS DOOR | NOV 01, 1991 |
| 083/021-01 | AB SURVEY | NOV 01, 1991 |



DEPARTMENT OF THE NAVY

MILITARY SEALIFT COMMAND, PACIFIC
OAKLAND, CALIFORNIA 94625-5010

IN REPLY REFER TO:

4200

Ser N101/2278/ET/jjp
27 November 1991

Southwest Marine, Inc.
Foot of Sampson Street
P. O. Box 13308
San Diego, CA 92113-0308
Attn: Ralph Orozco

Subj: USNS OBSERVATION ISLAND (T-AGM 23) CONTRACT
N00033-91-C-3142

Dear Mr. Orozco:

The following represents a recap of negotiations conducted 26 November 1991 at Military Sealift Command, Pacific (MSCPAC), and RFP's settled.

| <u>RFP/ITEM</u> | <u>STATUS</u> |
|-----------------|---------------|
| 016/732-01 | Settled |
| 020/723 | Settled |
| 031/743 | Settled |
| 030/743 | Settled |
| 032/745 | Settled |
| 046/733 | Settled |
| 045/749 | Cancelled |
| 008/715-01 | Cancelled |

The settled RFP's will be finalized into a modification based on negotiated hours and amounts.

Negotiations are next scheduled for 6 December 1991 at MSCPAC. In preparation for this negotiation, the following RFP's require submission of Southwest Marine quotations.

| <u>RFP/ITEM</u> | <u>RFP/ITEM</u> | <u>RFP/ITEM</u> |
|-----------------|-----------------|-----------------|
| 009/717-01 | 068/536 | 079/608-01 |
| 017/735 | 073/006-01 | 080/752 |
| 024/734 | 076/203-01 | 081/754 |
| 064 | 077/734-01 | 082/116 |
| 066/115 | 078/735-01 | 083/021-01 |

Please provide the above quotes, to include any subcontractor breakdowns prior to your arrival on 6 December 1991. You may FAX them in and bring originals with you or if you desire you can Federal Express them.

During our meeting on 26 November 1991 the following items were also discussed.

NWMAR130672

4200

Ser N101/2278/ET/jjp

27 November 1991

Subj: USNS OBSERVATION ISLAND (T-AGM 23) CONTRACT
N00033-91-C-3142

- a. Item 799 will be assigned an RFP number and passed on to you for quote.
- b. RFP's 005 and 006 are being held in abeyance until Item 799 is issued. RFP's 005 and 006 will then be quoted "0" change.
- c. RFP 077 will be revised to include new specifications for Item 734, which will cancel RFP 024/734.
- d. Modification P00007, RFP 015, reflected an incorrect amount charged to labor of \$1,800. The correct charge should have been \$1,000 and, this will be corrected on the next modification.
- e. RFP's 007 and 011 were to be checked by you to determine/reflect the proper credit to the Government for cancelling the items and issuing new work items.
- f. You are to provide a new quote for RFP 074/003.

Please review the above and let me know if there are any questions or disagreement.

Sincerely,


ERNEST F. TAYLOR
Contracting Officer

Copy to:
MSCPAC N713 - Pete Feeney
COMSC N102d



DEPARTMENT OF THE NAVY

MILITARY SEALIFT COMMAND, PACIFIC
OAKLAND, CALIFORNIA 94625-5010

IN REPLY REFER TO:

4200

Ser N101/2299/ET/et
6 December 1991

Southwest Marine, Inc.
Foot of Sampson Street
P.O. Box 13308
San Diego, CA 92113-0308
Attn: Ralph Orozco

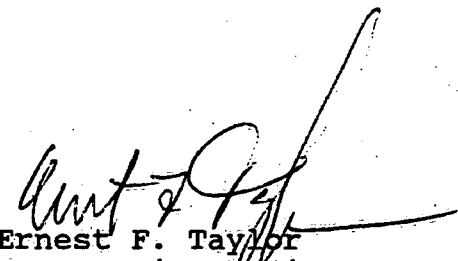
Subj: USNS OBSERVATION ISLAND; CONTRACT N00033-91-C-3142
CANCELLED RFP'S

Dear Ralph;

Please be advised that the following listed RFP's have been cancelled.

RFP 017 Cancelled by RFP 078

~~RFP 024 Cancelled by RFP 077~~ 12/6


Ernest F. Taylor
Contracting Officer

Copy To:
Port Engineer - Pete Feeney

NWMAR130674



M E M O R A N D U M

TO: Bob Schmidt
FROM: Ralph Orozco *R.O.*
DATE: 12-9-91

SUBJECT: Observation Island RFP's Negotiations

Gentlemen,

The following RFP's were settled on 12-06-91:

| | |
|---------------|------------|
| OI-062/533 | OI-068/536 |
| OI-007/714 | OI-011/724 |
| OI-033/746 | OI-085/910 |
| OI-077/734-01 | OI-024/734 |

Also discussed were RFP's:

OI-066
OI-025

MSC cancelled RFP OI-017/735 and RFP OI-023/720.

Ernie Taylor and Pete Feeney both are planning to arrive here today 12-9-91 and have planned an evening meeting to settle as many open issues as possible, if you have any questions or comments please contact me.



MEMORANDUM

TO: Bob Schmidt
FROM: Ralph Orozco *R.O.*
DATE: December 11, 1991
SUBJECT: Modification Status

Bob, in a continuing effort to settle all outstanding mods, MSC and myself, negotiated 12-09-91, 12-10-91 and 12-11-91. The following mods were either settled or canceled:

| <u>STATUS</u> | <u>RFP's/ITEM</u> | <u>STATUS</u> | <u>RFP's/ITEM</u> |
|--------------------|---------------------------|---------------|-------------------|
| canceled | OI-025/737 | settled | OI-081/754 |
| settled | OI-009/717-01 | settled | OI-005/712-01 |
| canceled | OI-066/115 | settled | OI-006/713-01 |
| settled <i>076</i> | OI- 067 203-01 | settled | OI-060/531 |
| settled | OI-059/530 | settled | OI-080/752 |
| settled | OI-078/735-01 | canceled | OI-023/720 |
| settled | OI-082/116 | | |

If you have any questions or comments, please contact me.

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT

1. CONTRACT ID CODE PAGE OF PAGE
1 5

2. AMENDMENT/MODIFICATION NO. P00007
3. EFFECTIVE DATE See Blk 16c
4. REQUISITION/PURCHASE REQ. NO.
5. PROJECT NO. (If applicable)
6. ISSUED BY CODE N00033
7. ADMINISTERED BY (If other than Item 6) CODE

DEPARTMENT OF THE NAVY
MILITARY SEALIFT COMMAND - CODE CTA N103
WASHINGTON NAVY YARD, BLDG 210, RM 223
WASHINGTON, DC 20398-5100

8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code)

SOUTHWEST MARINE, INC.
FOOT OF SAMPSON STREET
P.O. BOX 13308
SAN DIEGO, CA 92113-0308

9A. AMENDMENT OF SOLICITATION NO.

9B. DATED (SEE ITEM 11)

10A. MODIFICATION OF CONTRACT/ORDER NO.

N00033-91-C-3142

X 10B. DATED (SEE ITEM 13)

4 January 1991

CODE FACILITY CODE

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

☐ The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers ☐ is extended, ☐ is not extended.

Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods:

(a) By completing Items 9 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA (If required)

See Attached Page 5

13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS, IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

14. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.
B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 48.103(b).
C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:
D. OTHER (Specify type of modification and authority)

XX Clause H-5, Additional Requirements

E. IMPORTANT: Contractor ☐ is not, ☒ is required to sign this document and return 3 copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract number and location where feasible.)

THE CONTRACT IS MODIFIED AS FOLLOWS: SEE ATTACHED PAGES

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER (Type or print)

ROBERT A. MCKAY

Assistant General Manager

16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print)

ARMAND E. RIDOLFI
Contracting Officer

15B. CONTRACTOR/OFFEROR

(Signature of person authorized to sign)

15C. DATE SIGNED

NOV. 19 '91

16B. UNITED STATES OF AMERICA

BY

(Signature of Contracting Officer)

16C. DATE SIGNED

19 Nov 91

By mutual agreement the Contract referenced in Block 10A is hereby modified to reflect the following changes.

| <u>REQ #/ITEM</u> | <u>DESCRIPTION</u> | <u>AGR HOURS</u> | <u>HOURLY PRICE @ \$25/HR PER CLIN 0005</u> | <u>MATERIAL</u> |
|-------------------|--|------------------|---|-----------------|
| 001/007-01 | General Services for Sponsor | 0 | \$ 0 | \$32,772 |
| 002/018-01 | Storage Space Require- ments | 0 | 0 | 24,632 |
| 003/702-01 | Red Audio System | 0 | 0 | (7,035) |
| 004/711-01 | Load Test Measurement | | NO COST | |
| 010/719-01 | Stateroom and Conference Room Carpet | 402 | 10,050 | 13,925 |
| 012/726-01 | Exercise Room Upgrade | 80 | 2,000 | 5,483 |
| 014/729-01 | Protection of ESMC Instrumentation | 576 | 14,400 | 0 |
| 015/730-01 | Instrumentation Gauge/ Thermometer | 40 | 1,800 | (1,800) |
| 018/736 | Intrusion Alarm System | 1026 | 25,650 | 929 |
| 019/748 | HVAC/TWT Coolant System Status Mod. | 3960 | 99,000 | 41,817 |
| 022/201 | Expansion Joint Repairs | 794 | 19,850 | 18,150 |
| 027/739 | Mission Comm Center Vault Door | 198 | 4,950 | 6,551 |
| 028/740 | X-Band Btr Upgrade | 610 | 15,250 | 990 |
| 029/741 | Entertainment System Upgrade | 884 | 22,100 | 8,342 |
| 034/747 | Sponsor Power and IC Room Upgrade | 324 | 8,100 | 2,309 |
| 035/910-01 | Sea Valves and Overboard Discharge Valves | | CANCELLED | |

| | | | | |
|------------|--|------|-----------|--------|
| 036/110 | Engine Room Overhead Painting | 1277 | 31,925 | 619 |
| 039/521 | Anchor Windlass | 923 | 23,075 | 6,121 |
| 040/609 | Various Lagging and Insulation Repairs | 600 | 15,000 | 1,548 |
| 041/605-01 | Interior Tile and Underlay | 400 | 10,000 | 4,002 |
| 042/110-01 | Engine Room Overhead Painting | 480 | 12,000 | 619 |
| 043/522 | Port and Stbd Capstan | 1090 | 27,250 | 23,813 |
| 044/523 | Auxiliary Exhaust Make Up Valve | 160 | 4,000 | 4,239 |
| 047/731-01 | Sponsor Bulk Stowage Area | | NO COST | |
| 053/310 | EDG Sw Booster Pump Mtr Overhaul | 180 | 4,500 | 434 |
| 054/525 | #2 SSTG Circ Pump Overhaul | 272 | 6,800 | 4,703 |
| 055/526 | #2 SSTG Cond Pump Overhaul | 272 | 6,800 | 5,941 |
| 056/527 | #2 SSTG Aux Air Eject Cond Insp | 224 | 5,600 | 979 |
| 057/528 | #2 SSTG Aux Cond Insp | 292 | 7,300 | 1,623 |
| 058/529 | SSTG Overhaul | 1574 | 39,350 | 39,624 |
| 061/532 | Main Circ Pump Overhaul | 585 | 14,625 | 10,180 |
| 063/610 | Savin Copier Inspection and Repair | | CANCELLED | |
| 067/535 | Boiler Feed Pump Overhaul | 700 | 17,500 | 19,563 |
| 069/102-01 | Repair Watertight Doors | | CANCELLED | |
| 070/003-01 | General Services for Ship | 156 | 3,900 | 495 |
| 072/744 | S-Band BTR Upgrade | 843 | 21,075 | 4,177 |

75/211-01

Automatic Combustion

4550

113,750

133,250

TOTAL 23,472

\$398,995

2. This modification incorporates by reference the statement of work and the deliverables contained in the Request for Quotations listed above with the same force and effect as if they were in full text. Pursuant to Clause H-5, "Additional Requirements" of the Contract, Contractor agrees to perform the requirements of the statements of work and the deliverables for the price set forth in paragraph 3 below.

3. The contract price is increased by \$398,995 from \$5,784,883 to a new total of \$6,183,878 for the materials required by the statements of work incorporated herein.

4. The completion date of the contract, as modified, is unchanged.

5. As a result of this modification, twenty-three thousand four hundred and seventy-two (23,472) man-hours are obligated, resulting in 49,310 man-hours remaining under CLIN 0005, clause H-5.

6. The Additional Requirements ordered by this supplemental agreement, under the provisions of Section H, Clause H-5, are not subject to any claim or assertion of delay or disruption to the work being performed under this contract, any other government contract, or any work in progress for the government, and the increase in the contract price hereby agreed to represents full, complete, and final settlement of increased costs incurred from such "Additional Requirements". The contractor further agrees, again in accordance with Section H, Clause H-5, that the delivery date of this ship or any ship under government contract shall not be extended by reason of or as a result of these "Additional Requirements".

7. In consideration of the modification agreed to herein, the Contractor hereby releases the Government from any and all liability under this contract for equitable adjustment attributable to the additional work and circumstances arising from this modification.

DEC 12 '91 01:17PM SWM VIKING SERENADE
SENT BY:MILITARY SEALIFT CMD. :11-15-91 : 17:35 ;

2024336432-

P.6
619 238 0934: 6

ACCOUNTING AND APPROPRIATION DATA

AA 97X4930 ND2A 000 62387 0 062387 2E 000000 51800IMRUP92
(Applies to Item Numbers 003, 018, 102, 110, 201, 211, 310, 521, 522, 523,
525, 526, 527, 528, 529, 532, 535, 605, 609, 610, 910)

AB 97X4930 ND2A 000 62383 0 N62383 2E 03952F 660707024004
(Applies to Item Numbers 007, 702, 711, 719, 726, 729, 730, 731, 736,
739, 740, 741, 744, 747, 748)



DEPARTMENT OF THE NAVY

MILITARY SEALIFT COMMAND, PACIFIC
OAKLAND, CALIFORNIA 94625-5010

IN REPLY REFER TO:

4200

Ser N101/2319/ET/et
12 December 1991

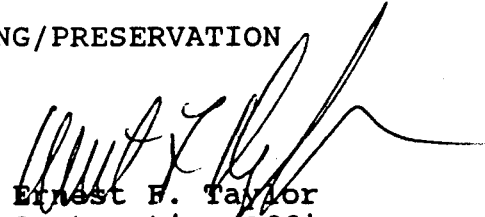
Southwest Marine, Inc.
Foot of Sampson Street
P.O. Box 13308
San Diego, CA 92113-0308
Attn: Ralph Orozco

Subj: USNS OBSERVATION ISLAND; CONTRACT N00033-91-C-3142
CANCELLED RFP'S

Dear Ralph;

Please be advised that the following listed RFP's have been cancelled per our discussions 12/9 thru 12/11. Also, per our discussions, RFP's 005 and 006 will be at no cost.

| <u>RFP #</u> | <u>ITEM #</u> | <u>TITLE</u> |
|--------------|---------------|-------------------------------------|
| 023 | 720 | SUPPLY AREA IMPROVEMENT |
| 025 | 737 | S-BAND TURRET TRANE AIR HANDLER |
| 066 | 115 | MISCELLANEOUS PAINTING/PRESERVATION |


Ernest F. Taylor
Contracting Officer

Copy To:
Port Engineer - Pete Feeney
Byran Vogel
COMSC/N103

NWMAR130682

PE MEMO 92-01/042
14 JANUARY 1992

MEMORANDUM

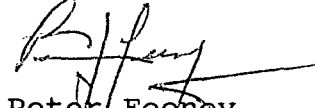
From: PETER FEENEY
To: BOB SCHMIDT, SWM
Subj: SPEC CLARIFICATION

The specification index contains two (2) item numbers with no statement of work included.

Please disregard the following item number:

524 Chillwater Valves

Sincerely,


Peter Feeney
Port Engineer

PF/ph
B:PEMEMO.042

NWMAR130683



DEPARTMENT OF THE NAVY

MILITARY SEALIFT COMMAND, PACIFIC
OAKLAND, CALIFORNIA 94625-5010

IN REPLY REFER TO:

January 27, 1992

SOUTHWEST MARINE, INC.
Foot of Sampson Street
San Diego, California 92113

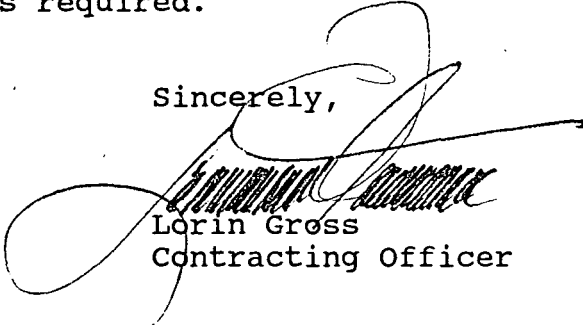
Subj: USNS Observation Island, N00033-91-C-3142

Attn: Rob Thomas

RFP's 090, 094 and 096 dated January 15, 1992 are hereby canceled.

No further action is required.

Sincerely,



Lorin Gross
Contracting Officer

LG/ph
pememo.065

NWMAR130684



DEPARTMENT OF THE NAVY

MILITARY SEALIFT COMMAND, PACIFIC
OAKLAND, CALIFORNIA 94625-5010

IN REPLY REFER TO:

February 4, 1992

SOUTHWEST MARINE, INC.
Foot of Sampson Street
San Diego, California 92113

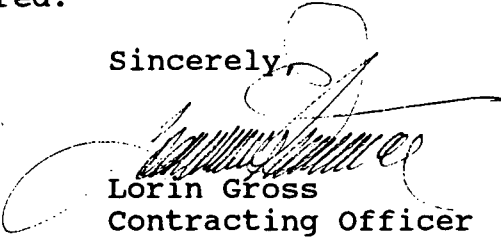
Subj: USNS Observation Island, N00033-91-C-3142

Attn: Rob Thomas

RFP 073, Item No. 006-1 dated August 7, 1991 is hereby canceled.

No further action is required.

Sincerely,


Lorin Gross
Contracting Officer

LG/ph
comemo.002

| | |
|-------------------------------------|------------------------------|
| <input type="checkbox"/> | PRESIDENT |
| <input checked="" type="checkbox"/> | V. PRESIDENT BAM |
| <input checked="" type="checkbox"/> | PROD. MGR. CVF |
| <input checked="" type="checkbox"/> | PROD. SUPT. DM |
| <input checked="" type="checkbox"/> | CONTRACTS RAK, CB, RT |
| <input type="checkbox"/> | ESTIMATING |
| <input type="checkbox"/> | PERSONNEL |
| <input type="checkbox"/> | ACCOUNTING |
| <input type="checkbox"/> | MATERIAL |
| <input type="checkbox"/> | ENG. |
| <input type="checkbox"/> | QA |
| <input type="checkbox"/> | FACILITIES |
| <input type="checkbox"/> | PLANNING |
| <input checked="" type="checkbox"/> | PMO BS, CK |
| <input type="checkbox"/> | |

1992 FEB -5 AM 9:31

NWMAR130685

Bob,

The following RFPs were
settled on Fri., 6 March 92.

160

176 - cancelled

179

~~212~~
213

215

~~224~~

232

233

235

236

240

241

245

250 - cancelled

252

253

254

255

257

258

260

and

224

212

Have a good day,

Rob

Bob,

I settled the following

RFPs today 19 Mar 92

268

270

273

274

276

279

280

Rob

Dear Bob,

I settled the following
R.F.P.s on 12 Mar 92;

239

244

247

248

261

262

263

264 - ground cable

266

267

269

Bob

Dear Bob,

I settled the following
R.F.P.s on 12 Mar 92;

| | | |
|-------------------------|--|---|
| 239 / 302-1 | HIGH TEMP ALARM | |
| 244 / 211-16 | ACC SYSTEM - CONTROL AIR AIDS | ✓ |
| 247 / 204-2 | D/A TANK | |
| 248 / 503-2 | FIXED & PORTABLE FIRE EXTING. SYS'S | |
| 261 / 301-4 | SUBD CLEANING - GRND DETECTORS | ✓ |
| 262 / 01211-8 | REPLACEMENT PARTS - LIFEBOATS | |
| 263 / 602-4 | LIFEBOAT RECERTIFICATION | |
| 264 / 762 | ground cable | |
| 266 / 610-2 | SAVIN Copier Inspection/Repair | |
| 267 / 211-14 | ACC SYSTEM - LDP REPLACEMENT | |
| 269 / 203-1 | BOILER REPAIRS - SYNTH TUBO ROLL | |

Bob



TOTEM OCEAN TRAILER EXPRESS, INC.

MARINE OPERATIONS DIVISION

500 ALEXANDER AVENUE/TACOMA, WASHINGTON 98421 • (206) 756-9208
SEATTLE (206) 628-9276 • FAX (206) 756-9200 • TELEX 510-600-4900 TOTE TAC

December 10, 1991

Mr. Quintin Watt
NORTHWEST MARINE, INC.
P.O. Box 3109
Portland, OR 97208

Re: S.S. NORTHERN LIGHTS STRETCHING

Dear Mr. Watt:

Due to several requests, the date for proposals to stretch the S.S. NORTHERN LIGHTS has been extended to February 10, 1992.

The vessel is available for drydock survey at Atlantic Marine in Mobile, Alabama. Normally obscured parts of the vessel, such as the underwater bottom and innerbottom tanks, are available in their as-is condition for survey until December 22, 1991.

The GREAT LAND (stretched sister ship) is available for drydock survey at Todd Shipyard, Seattle, from December 28 to January 7.

Very truly yours,

TOTEM OCEAN TRAILER EXPRESS, INC.

R. Magee
Robert P. Magee
Vice President Marine Operations

~~bill~~ BILL ZAVIN
BILL JOHNSTON 12/18/91
~~BOB~~
~~ALEX~~
~~MAT~~
DON NUCENT
GEORGE RIDDLE

INTRODUCTION

This brief provides direct response to the data requested by U.S. Marine Management, Inc. Due to the fact that four SWM facilities are described, much of the information requested is provided by division.

CORPORATE BACKGROUND

Southwest Marine, Inc., (SWM) was founded in 1977 as an owner-operated California corporation specializing in the repair of U.S. Navy ships. Today, SWM is the largest owner-operated ship repair, modernization, and conversion firm in the United States, with full service shipyards blanketing the West Coast and reaching into the South Pacific Islands. Exhibit (1) displays the location of all SWM facilities, along with pertinent data for drydocking capabilities, average manning, wet berth capacity, and crane services.

All SWM facilities operate under the same corporate structure and philosophy, which promotes shared technology and resources, ensuring the same high levels of quality and professionalism whether your ship is in Portland, Oregon or San Diego, California. SWM Quality Control programs operate in compliance with MIL-I-45208A, and have been approved by SUPSHIP Seattle, San Francisco, Long Beach, and San Diego. SWM maintains NAVSEA-certified drydocks at all facilities and, in addition to being a Master Ship Repair Agreement (MSRA) holder, is NAVSEA-certified as a Master Ordnance Repair (MOR) contractor, capable of installing and testing the most complex combat and electronics systems aboard U.S. Navy ships. SWM is also a Qualified Services Listing (QSL) contractor, certified to overhaul main feed pumps, turbines, and forced draft blowers for Navy ships.

MANAGEMENT EXPERIENCE

Southwest Marine's experience in the management of all types of Government and Commercial ship repair, modernization, and conversion programs is extensive. All Southwest Marine divisions have participated in numerous challenging programs. Even the San Francisco and Portland divisions have extensive Navy ship repair experience although, due to both economic and geographic factors, they are primarily engaged in Commercial ship repair. Exhibit (2) provides a short synopsis of SWM San Diego's recent and current ship repair experience. All four SWM full-service shipyards maintain similar workloads and relevant experience.

SWM San Diego is currently completing the highly successful NTU ROH of USS GRIDLEY (CG-21), during which over 80% growth in workscope has been accommodated with no impact to major contractual milestones. This division is also currently accomplishing a major conversion of a passenger liner, the Viking Serenade, while supporting numerous other programs including Phased Maintenance Programs (PMPs) for LSD and LPD class ships. Past experience includes the on-time or early

Exhibit (2)
Recent and Current Major Navy Ship Repair Experience
San Diego Division

| Ship | Hull No. | Avail Type | Mandays | | % Growth | Delivery | Point of Contact | Phone (619) |
|------------------|----------|------------------------------|---------|----------------|-------------|-------------|------------------|----------------|
| GRIDLEY* | CG-21 | NTU-ROH | 65,500 | 120,500 | 84% | On Schedule | Judy Harmon | 556-1174 |
| O'BRIEN | DD-975 | ROH-VLS | 62,610 | 90,091 | 43% | Early | Ron Naccari | 556-1050 |
| ROBISON | DDG-12 | PMF | 3,350 | 4,600 | 37% | On Time | Joe Tuquero | 556-1172 |
| NEW ORLEANS | LPH-11 | PMF | 15,317 | 20,750 | 35% | On Time | Ron Naccari | 556-1050 |
| KINKAID | DD-965 | PRAV | 6,868 | 8,255 | 20% | On Time | Fred Kuehl | 556-1173 |
| VIKING SERENADE* | | Modernization/ Drydocking | 83,191 | In Progress | --- | --- | Randy Butler | 238-1000 |
| AZURE SEAS | | Drydocking/ Repair | 1,023 | 1,660 | 6% | On Time | Dave Sparkhal | 238-1000 |
| USNS HESS | T-AGS 38 | Drydocking Repair | 6,134 | 7,888 | 7% | On Time | Russ Marshall | 238-1000 |

*On Going

accomplishment of the USS FIFE (DD-991) and USS O'BRIEN (DD-975) ROHs, during which the TOMAHAWK VLS, AN/SQQ-89, CIWS, and other complex weapons and electronics suites were installed. The success of these programs was directly attributable to Southwest Marine's philosophy of shared corporate resources. For example, installation of the AN/SQQ-89 RAST System on the USS O'BRIEN was enhanced by the use of special jigs and other installation tools developed by the company's Portland division (NWM). The San Diego division also provides post delivery support to both AVONDALE and INGALLS Shipyards for new ships homeported in the San Diego area.

SWM San Pedro is currently accomplishing the DSRA of USS VANDEGRIFT (FFG-48) and the PMP for Long Beach-based LST class ships. This division recently completed a two-ship segment of the AOR-1 Class PMP, the EDSRA of USS JARRETT (FFG-33), and provides guarantee support, as required, to INGALLS Shipbuilding.

SWM San Francisco performed all advance planning for the recently completed four-ship AOR PMP and performed production work for two of the ships. This division has also supported SRAs aboard USS ENTERPRISE (CVN-65) and USS CARL VINSON (CVN-70), in addition to numerous availabilities on other Navy, Coast Guard, Army, and Air Force vessels. This division also provides AVONDALE Shipyards with post delivery support for ships delivered to Military Sealift Command (MSC).

NWM Portland is currently performing the NTU ROH of USS WILLIAM H. STANDLEY (CG-32) and recently completed the USS OKINAWA (LPH-3) ROH. Previous experience includes the ROHs of both USS PAUL F. FOSTER (DD-964) and USS CUSHING (DD-985) for which NWM developed many unique production techniques and tools, including RAST trough installation jigs, which were later used by other company divisions to expedite production efforts. Commercial experience

includes the recent shortening of the M/V KEYSTONE CANYON, a task which required NWM to cut the ship into three sections, remove the mid-section, and join the remaining sections and shipboard systems.

SUPERVISORY PERSONNEL EXPERIENCE

SWM maintains a highly experienced and capable work force at all levels of management, supervision, and production, as displayed by the magnitude and complexity of the repair and modernization programs SWM regularly executes. The continuous provision of high quality, on-time, and cost effective repairs at all SWM divisions can only be the product of experience and dedication. The continuing quality of SWM's personnel resources are guaranteed through the establishment of formal training and certification programs, use of standardized production procedures, and rigid enforcement of SWM's Quality Control program.

FINANCIAL INFORMATION

The financial data requested is provided as enclosure 3 to this submission.

FACILITIES INFORMATION

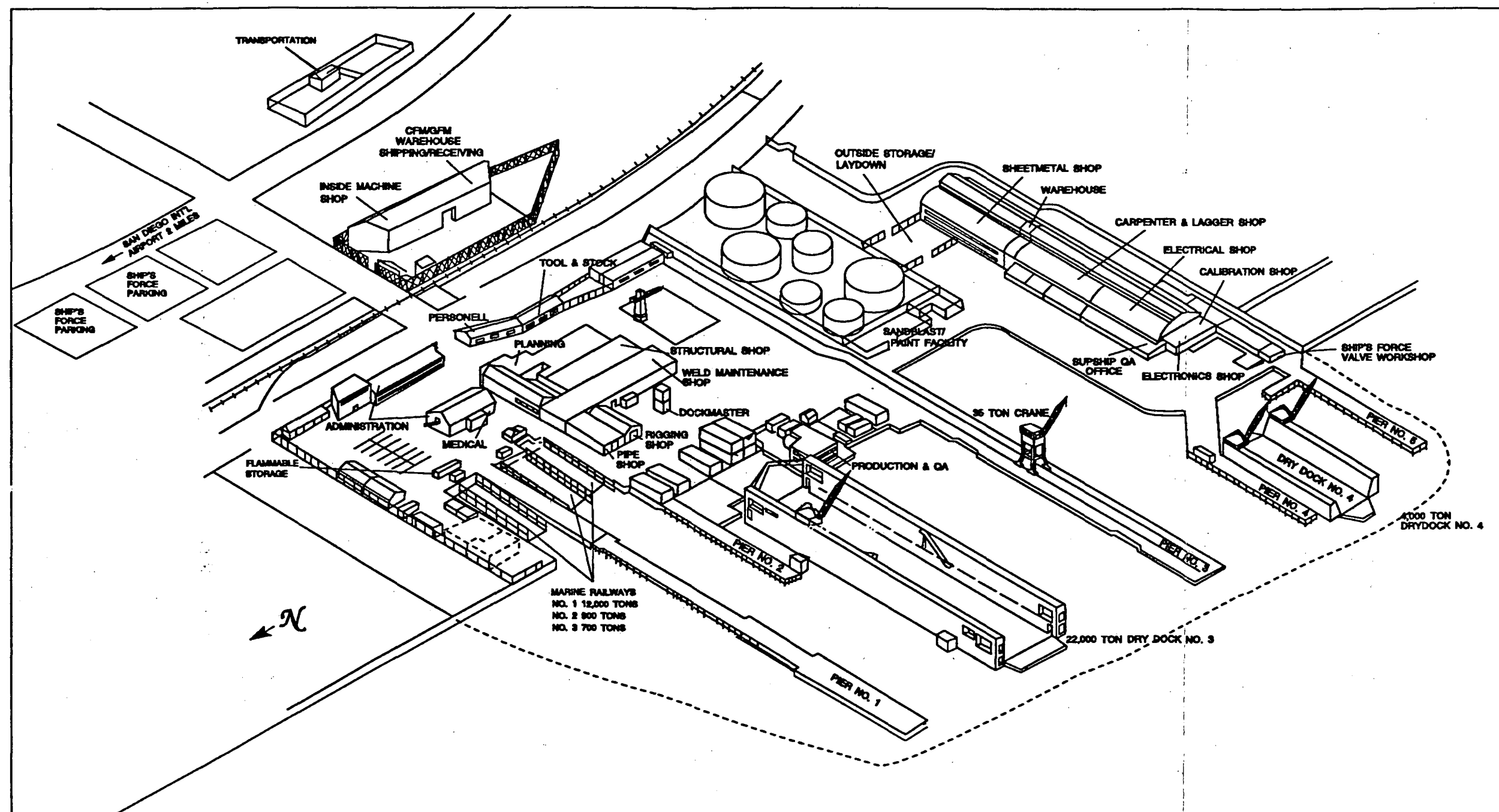
SAN DIEGO DIVISION

The San Diego division is located on San Diego Bay, convenient to both the 32nd Street and North Island Naval Bases. The facility has unobstructed deep water access from the main shipping channel, two drydocks, crane capacity to 140 tons, and the full range of temporary services. Exhibit (3) displays an overview of the San Diego division including administrative, production, warehouse, drydock, and pier facilities. Exhibit (4) displays the major shop equipment available to support the T-AGOS overhaul. Exhibit (5) displays a breakdown of the division's current production manpower.

Drydock No. 4 would be utilized during the T-AGOS drydock/overhaul project. The lifting capacity rating is 4,000 long tons with an 8 foot freeboard. Its length is 402 feet overall with an overall breadth of 96 feet and a clear width between wingwalls of 68 feet.

SOUTHWEST MARINE, INC.

Exhibit (3)
San Diego Division Shipyard



Use or disclosure of data contained on this sheet is subject to the restriction on the title page of this proposal or quotation

Exhibit (4a)
San Diego Shop Equipment

ELECTRICAL SHOPSIZE

10,500 SQ FT (1) 3-3/4 TON JIB CRANE

CRANESTORAGE(1) TOOLS (1) 200 SQ. FT.
(2) MATERIAL (2) 1,000 SQ. FT.STAGING 500 SQ. FT.MAJOR MACHINERY

- 1 EA. BAKE OVEN
- 1 EA. BALANCE MACHINE 3' X 3' SWING
- 1 EA. DIP TANK
- 1 EA. PLATING LATHE
- 1 EA. MACHINE LATHE
- 1 EA. BEAD BLASTER
- 1 EA. DRILL PRESS. 1/2-INCH CAPACITY
- 1 EA. VIBRATION ANALYZER
- 2 EA. 50-1000 V MEGGERS
- 1 EA. HYPOT
- 2 EA. HIGH AMP SWITCHING CONTRACTS
- 1 EA. HYDRAULIC PRESS 25 TON, WILSON
- 1 EA. SOLVENT TANK
- 1 EA. BEARING INDUCTION HEATER
- 1 EA. REWIND MACHINE & FULL SET OF HEADS
- 1 EA. SURGE TESTER
- 3 EA. POWER SUPPLIES, 2 AT 400, 1 AT 800 AMP DC
- 1 LOT VARIOUS HAND-HELD MULTIMETERS, CLAMP-ON AMMETERS, ETC.
- 1 LOT CONNECTOR INSTALLATION TOOLS
- 1 EA. 60 HZ REGULATED POWER SUPPLY
- 1 EA. 400 HZ REGULATED POWER SUPPLY
- 1 LOT GENERAL-PURPOSE ELECTRONIC TEST EQUIPMENT
- 1 EA. 6"-12" HORIZONTAL BAND SAW
- 1 EA. 18" VERTICAL BAND SAW

SPECIAL TEST EQUIPMENT FACILITIES WITHIN ELECTRIC & ELECTRONIC SHOPS
5,000 KW SALT BOX
800 KW SALT BOX
350-360 KVA REACTIVE/LOAD BANKS

CARPENTER SHOPSIZE

14,160 SQ. FT.

STORAGE(1) TOOLS (1) 130 SQ. FT.
(2) MATERIAL (2) 3,600 SQ. FT.
(+16,100 SQ. FT. SCAFFOLDING)STAGING 1,750 SQ. FT.MAJOR MACHINERY

- 1 EA. ROCKWELL TILTING ARBOR SAW 12"-14"
- 1 EA. POWERMATIC TABLE SAW 10"
- 1 EA. POWERMATIC WOOD LATHE
- 1 EA. SOUTH BEND LATHE
- 1 EA. YATES BANDSAW
- 2 EA. CRESCENT BANDSAW
- 1 EA. ROCKWELL RADIAL ARM SAW 16"
- 1 EA. CRAFTSMAN RADIAL ARM SAW 10"
- 1 EA. ROCKWELL DRILL PRESS
- 1 EA. BLACK HAWK DRILL PRESS
- 1 EA. OLIVER PLANER
- 1 EA. JENISON JOINTER 16"
- 1 EA. ROCKWELL JOINTER 6"
- 1 EA. FAY-EGAN JOINTER 12"
- 1 EA. CRAFTSMAN SHAPER
- 1 EA. TOSHIBA DISC SANDER 12"
- 1 EA. WALKER-TURNER DISC 10" - BELT SANDER 48"
- 1 EA. GENERAL ELECTRIC HACK SAW 18"
- 1 EA. DOWEL HOLE MACHINE MILWAUKEE
- 1 EA. CRAFTSMAN GRINDER 6"

MACHINE SHOPSIZEINSIDE: 19,000 SQ. FT.
OUTSIDE: 6,000 SQ. FT.CRANES1 EA. 20 TON OVERHEAD TRAVEL CRANE
1 EA. 10 TON OVERHEAD TRAVEL CRANESTORAGE(1) TOOLS (1) 500 SQ. FT.
(2) MATERIAL (2) 1,500 SQ. FT. PLUS YARD STORAGESTAGING

1,000 SQ. FT.

MAJOR MACHINERY

- 2 EA. 72" X 34" NILES LATHE
- 1 EA. 64" X 36" BETTS LATHE
- 1 EA. 32" X 132" SZERSZAM LATHE
- 1 EA. 20" X 108" AXELSON LATHE
- 1 EA. 20" X 72" DAEWOOD LATHE
- 1 EA. 20" X 60" AXELSON LATHE
- 3 EA. 42" MILLS
- 2 EA. 62" MILLS
- 1 EA. 42" VERTICAL GRAFFENSTADEN LATHE
- 1 EA. 62" VERTICAL KING LATHE
- 1 EA. 1/2" ROCKWELL PEDESTAL DRILL PRESS
- 1 EA. 5' CARLTON RADIAL ARM DRILL
- 1 EA. 3' MEUSER RADIAL ARM DRILL
- 1 EA. 36" BLANCH GRINDER
- 1 EA. 6" X 18" DELTA SURFACE GRINDER
- 1 EA. 2-1/2" HORIZONTAL BORING MILL
- 1 EA. 5" HORIZONTAL BORING MILL
- 1 EA. 36" JOHNSON VERTICAL BAND SAW
- 1 EA. 18" X 23" DOALL HORIZONTAL BAND SAW
- 1 EA. 25 TON HYDRAULIC PRESS
- 1 EA. 50 TON HYDRAULIC PRESS
- 1 EA. 2 STATION UNIVERSAL BEAD BLASTER
- VARIOUS GRINDERS & SANDERS

SPECIAL TEST EQUIPMENT(1) VALVE OVERHAUL & HYDROSTATIC TESTING CAPABILITIES
(2) ROCKWELL HARDNESS TESTER 20,000 PSI HYDROSTAND

Exhibit (4b)
San Diego Shop Equipment

PIPE SHOPSIZECRANES

INSIDE: 6,800 SQ FT

2 EA. 2 TON OVERHEAD TRAVEL
CRANES
1 EA. 1 TON OVERHEAD TRAVEL
CRANE

STORAGE

(1) TOOLS (1) 500 SQ. FT.
(2) MATERIAL (2) 7,500 SQ. FT.

STAGING

1,500 SQ. FT.

MAJOR MACHINERY

4 EA. RIDGID THREADING MACHINES,
1/8" - 8"
1 EA. LEBLOND REGAL LATHE, VARIABLE SPEED
1 EA. COAST BENDER 8" IPS SCH 80
1 EA. PIPE BENDER NO. 2, 2" SCH 80,
5" RADIUS
1 EA. BUFFALO, PUNCH HOLES UP TO
7/8" SHEAR PLATE 5/8"
2 EA. HAND OPERATED HYDRAULIC
BENDER, 1/2" - 2"
2 EA. ELECTRIC HYDRAULIC BENDER,
1/2" - 3"
1 EA. CLARK, 3H9AWD, 12" WHEELS
1 EA. GRAY PEDESTAL GRINDER,
9" WHEELS
6 EA. P-GRINDER, DATCO, 90 DEGREES & STRAIGHT
4 EA. LINCOLN 250 WELDER
1 EA. LINCOLN SHORT ARC WELDER
1 EA. TIG #433 HIGH-FREQUENCY WELDER
2 EA. AEROQUIP 1/4" TO 2" HOSE MACHINE
3 EA. VERTICAL BAND SAWS
1 EA. WALKER TAPERED DRILL PRESS, PEDESTAL
1 EA. CLEARMAN TAPERED DRILL PRESS, BENCH

SPECIAL (1) SHOP HYDROSTATIC TESTING
TEST CAPABILITIES
EQUIPMENT (2) HYDRO TEST PUMP 6000 PSI

SHEET METAL SHOPSHOP SIZECRANE

13,300 SQ FT

1 EA. 1/2 TON CRANE

STORAGE

(1) TOOLS (1) 210 SQ. FT.
(2) MATERIAL (2) 1,000 SQ. FT. PLUS YARD STORAGE

STAGING

300 SQ. FT.

MAJOR MACHINERY

1 EA. POWER SHEAR, WYSON & MILLES,
10", 18 GAUGE
1 EA. POWER BRAKE, PACIFIC 1/4" X 144", 150-TON MAX
1 EA. POWER BRAKE, H.T.C. HYDRA, 96", 14 GAUGE
ASSORTED DIES
1 EA. POWER ROLLER PECK-STOW & WILCOX, 11 GAUGE,
36" ROLLS
1 EA. POWER ROLLER, PECK-STOW & WILCOX, 1/4" THICK,
96" ROLLS
1 EA. HAND BRAKE, CHICAGO, 10-FOOT
2 EA. HAND BRAKE, CHICAGO, 4-FOOT, 48" FINGER BRAKE
1 EA. BAND SAW, DOALL METAL MASTER,
3-WHEEL, ISA
1 EA. IRON CRAWLER W/PUNCHES, NOTCHER, ANGLE
CUTTER & SHEAR
1 EA. TURRET PUNCH, ROTEX, 18 GAUGE, 2-1/2" DIA.,
ASSORTED DIES

SHEET METAL SHOP CONT.MAJOR MACHINERY (CONT)

1 EA. CIRCLE CUTTER, GEORGE TOOL CO.,
54" DIA
1 EA. STOMP SHEAR, NIAGARA, 36", 18 GAUGE
1 EA. POWER LOCKFORMER, 18 GAUGE
1 EA. PITTSBURG & PIPELOCK FORMER, 16 GAUGE
2 EA. WELDER, AIRCO 250 AMP TIG, 10-310 AMP
1 EA. HELIWELDER, AIRCO 250 AMP, 7-310 AMP
1 EA. CNC/CAM - PLASMA-ARCH WITH SOFTWARE
2 EA. WELDER, AIRCOMATIC MIG, 20 AMP, AIRCO
WIRE FEEDER
2 EA. WELDER, AIRCO, AC-DC (STICK), 35-270 AMP
1 EA. WELDER AIRCO, CV-250, 16-36 V, 250 AMP
1 EA. HAND ROLLER, PEXTO, 36" ROLLS
2 EA. FORMING, BEADING, EDGING MACHINE, 16 GAUGE
1 EA. BAR FOLDER, NIAGARA, 18 GAUGE
1 EA. 36" PULLMAX NOTCHER
1 EA. HAND BRAKE, CHICAGO, 8"
1 EA. HAND BRAKE, PECK-STOW, 30"
1 EA. BAND SAW, DO-ALL
2 EA. HAND NOTCHER, PECK-STOW/
DI-ACRO
2 EA. DRILL PRESS, SUMMIT
1 EA. PUNCH/FABRICATOR, WALES
3 EA. HAND SHEARS, BEVERLY

SANDBLAST/PAINT SHOPSIZE

20,700 SQ. FT.

STORAGE

(1) TOOLS (1) 2,000 SQ. FT.
(2) MATERIAL (2) 1,600 SQ. FT.

STAGING

1,400 SQ. FT.

SPECIAL SAND RECYCLING EQUIPMENT
TEST HAZARDOUS WASTE HANDLING FACILITIES
EQUIPMENT

MAJOR MACHINERY

2 EA. 10 TON SANDBLASTING VACUUM
RECOVERY SYSTEM
1 EA. 600 LB SANDBLAST POT, W/ONE
NOZZLE
1 EA. 600 LB SANDBLAST POT, W/2
NOZZLES
2 EA. 6 TON SANDBLAST POT
W/4 NOZZLES
1 EA. 18 TON SANDBLAST POT W/6
NOZZLES
2 EA. 28 TON STEEL-SHOT BLAST POT
W/8 NOZZLES
1 EA. 50 TON STEEL-SHOT BLAST POT
W/8 NOZZLES
1 EA. 400 TON BULK SAND HOPPER
10 EA. 2-1/2 TON FLO-BINS WATERTIGHT
SAND CONTAINERS
2 EA. 34 TON STEEL-SHOT HOPPER FOR 28 TON BLAST POT
6 EA. GRACO AIRLESS PUMP 45:1
3 EA. GRACO AIRLESS PUMP 30:1
10 EA. 2 GALLON CONVENTIONAL
PRESSURE POT
2 EA. 2 GALLON AGITATOR PRESSURE POT (INORGANIC ZINC)
4 EA. 5 GALLON CONVENTIONAL
PRESSURE POT
2 EA. 5 GALLON CONVENTIONAL AGITATOR POT (NON-SKID)
1 EA. SPRAYBOOTH
1 EA. HEATER FOR AIRLESS "HOT
APPLICATION" OF COATINGS
6 EA. BULLARD AIR-BREATHING FILTER
1 EA. BLASTRAC MACHINE 48"
1 EA. BLASTRAC MACHINE 20"
1 EA. BLASTRAC MACHINE 10"
2 EA. DUST COLLECTOR 15,000 CFM
1 EA. DUST COLLECTOR 8,000 CFM

Exhibit (4c)
San Diego Shop Equipment

| STRUCTURAL SHOP | | | RIGGING SHOP | | |
|--|-------|--|---|--|----------------------------|
| <u>SIZE</u> | | <u>CRANES</u> | <u>SIZE</u> | | <u>CRANES</u> |
| 16,000 SQ. FT. | 3 EA. | 8-3/4 TON JIB CRANE (SHIPFITTER'S FABRICATION AREA) | 2,541 SQ. FT. | | VARIOUS (NOTE 1) |
| <u>STORAGE</u> | | | <u>STORAGE</u> | | |
| (1) TOOLS | | (1) MAIN TOOL ROOM (5,500 SQ. FT.) | (1) TOOLS | | (1) 300 SQ. FT. |
| (2) MATERIAL | | (2) 15,000 SQ. FT. (YARD STORAGE) | (2) MATERIAL | | (2) 2,200 SQ. FT. (NOTE 2) |
| <u>STAGING</u> | | | <u>STAGING</u> | | |
| 10,000 SQ. FT. | | | (NOTE 2) | | |
| 4,000 SQ. FT. (FABRICATION BED) | | | | | |
| <u>MAJOR MACHINERY</u> | | | <u>MAJOR MACHINERY</u> | | |
| <u>IRON WORKING EQUIPMENT</u> | | | 12 EA. 1/2 TON CHAINFALLS | | |
| 1 EA. RADIAL ARM DRILL | | | 38 EA. 1 TON CHAINFALLS | | |
| 1 EA. BUFFALO IRON WORKER | | | 22 EA. 1-1/2 TON CHAINFALLS | | |
| 1 EA. TING JIANG PUNCH | | | 18 EA. 2 TON CHAINFALLS | | |
| 1 EA. CLEVELAND IRON WORKER | | | 17 EA. 3 TON CHAINFALLS | | |
| 1 EA. DO-ALL BAND SAW | | | 4 EA. 4 TON CHAINFALLS | | |
| 2 EA. PRESS BRAKE 400-TON | | | 1 EA. 5 TON CHAINFALLS | | |
| 1 EA. PLATE SHEAR, 3/4" X 12" CAPACITY | | | 8 EA. 6 TON CHAINFALLS | | |
| 1 EA. PLATE ROLLER, 3/4" PLATE CAPACITY | | | 3 EA. 8 TON CHAINFALLS | | |
| 1 EA. TRAVAGRAPH OPTICAL BURNING MACHINE (SIX BURNER) WITH PAC 44 PLASMA | | | 7 EA. 10 TON CHAINFALLS | | |
| 1 EA. ABRASIVE CUT-OFF SAW | | | 7 EA. 12 TON CHAINFALLS | | |
| 1 EA. SHAPE ROLLER | | | 2 EA. 17 TON AIR HOIST | | |
| 4 EA. PLATTENS | | | 2 EA. 25 TON AIR HOIST | | |
| <u>BURNING/WELDING EQUIPMENT</u> | | | 2 EA. 30 TON CHAINFALLS | | |
| 15 EA. SHAPE RACKS | | | 14 EA. 3/4 TON COME-A-LONG | | |
| 160+ WELDING UNITS (OXYACETYLENE, TIG, MIG, ARC, PLASMA, HI-FREQ.) AND ASSOCIATED POWER SUPPLIES | | | 33 EA. 1 TON COME-A-LONG | | |
| 50+ WIRE FEEDERS | | | 48 EA. 1-1/2 TON COME-A-LONG | | |
| 1 EA. TANAKA TRACK BURNER | | | 30 EA. 3 TON COME-A-LONG | | |
| 1 EA. MK RAT-PACK TRACK BURNER | | | 14 EA. 6 TON COME-A-LONG | | |
| 2 EA. COOPER HEAT SET-UP | | | 1 LOT SLINGS, SHACKLES, RIGGING GEAR, DOLLIES | | |
| | | | 1 EA. ZINC SMELTING FURNACE | | |
| | | | 1 EA. CUT OFF MACHINE 14" | | |
| | | | 1 EA. DRILL PRESS | | |
| | | | 1 EA. GRINDER 10" | | |
| | | | 1 EA. WELDING MACHINE | | |
| | | | 1 EA. PYROMETER | | |
| | | | 6 EA. HYDRUSHEAR | | |
| | | | 1 EA. HYDRAULIC SWAGER | | |
| | | | <u>SPECIAL TEST EQUIPMENT</u> | | |
| | | | (1) FACILITIES (1) 10 EA. 10 LBS STEEL WEIGHTS | | |
| | | | 250 EA. 50 LBS LEADS INGOTS | | |
| | | | 20 EA. 85 LBS CONCRETE BLOCKS | | |
| | | | 1 LOT TEST WEIGHTS 100 LBS TO 30,000 LBS | | |
| | | | 1 EA. HYDRAULIC DECK TIEDOWN TESTER | | |
| | | | 1 EA. PADEYE TESTER | | |
| | | | 1 LOT DYNAMOMETERS TO 100,000 LBS | | |
| | | | 1 EA. LOAD CELL 150,000 LBS | | |
| | | | 1 EA. DECK TIE DOWN TESTER | | |
| | | | (2) SPECIAL (2) 1 EA. TUGBOAT | | |
| | | | 1 EA. PUSHBOAT | | |
| | | | NOTE: | | |
| | | | (1) A COMMON AREA WITH 2,200 SQ. FT. IS UTILIZED FOR BOTH STORAGE AND STAGING. | | |

Exhibit (5)
San Diego Division Production Manpower

| | PRODUCTION CRAFTS | | | | | | PROD * SUPPORT | TOTAL |
|---|-------------------|--------|-------|--------|----------------|--------|-------------------|---------|
| | STRUCT | MACH | PIPE | ELECT | SHEET METAL | OTHER | | |
| PERSONNEL CURRENTLY ON-BOARD | 190 | 175 | 153 | 135 | 90 | 559 | 179 | 1,481 |
| SOURCES: RECALL FROM LAYOFF | 155 | 69 | 45 | 66 | 48 | 530 | 23 | 936 |
| UNSOLICITED APPLICATIONS | 435 | 345 | 190 | 320 | 95 | 1,100 | 40 | 3,260 |
| LOCAL LABOR MARKET ** | 6,100 | 14,788 | 5,400 | 17,000 | 1,800 | 85,000 | 1,000 | 115,787 |
| NOTES: * INDIRECT PERSONNEL ** CURRENT INFORMATION SUPPLIED BY CALIFORNIA EMPLOYMENT DEPARTMENT | | | | | | | | |

SAN PEDRO DIVISION

The San Pedro division is located on Terminal Island, convenient to both the Long Beach Naval Station and Shipyard. The facility has unobstructed access to the ocean, drydocking capabilities to 11,000 long tons, crane capacity to 140 tons, and all temporary services. Exhibit (6) displays an overview of the San Pedro division, including administrative, production, warehouse, drydock, and pier facilities. Exhibit (7) displays the major shop equipment available to support the T-AGOS project. Exhibit (8) displays the division's current production manpower composition.

Drydock No. 2 would be utilized during the T-AGOS drydock/overhaul project. The lifting capacity rating is 2,800 long tons with a 12 inch freeboard. Its length is 379 feet overall with an overall breadth of 84 feet and a clear width between fenders of 55 feet.

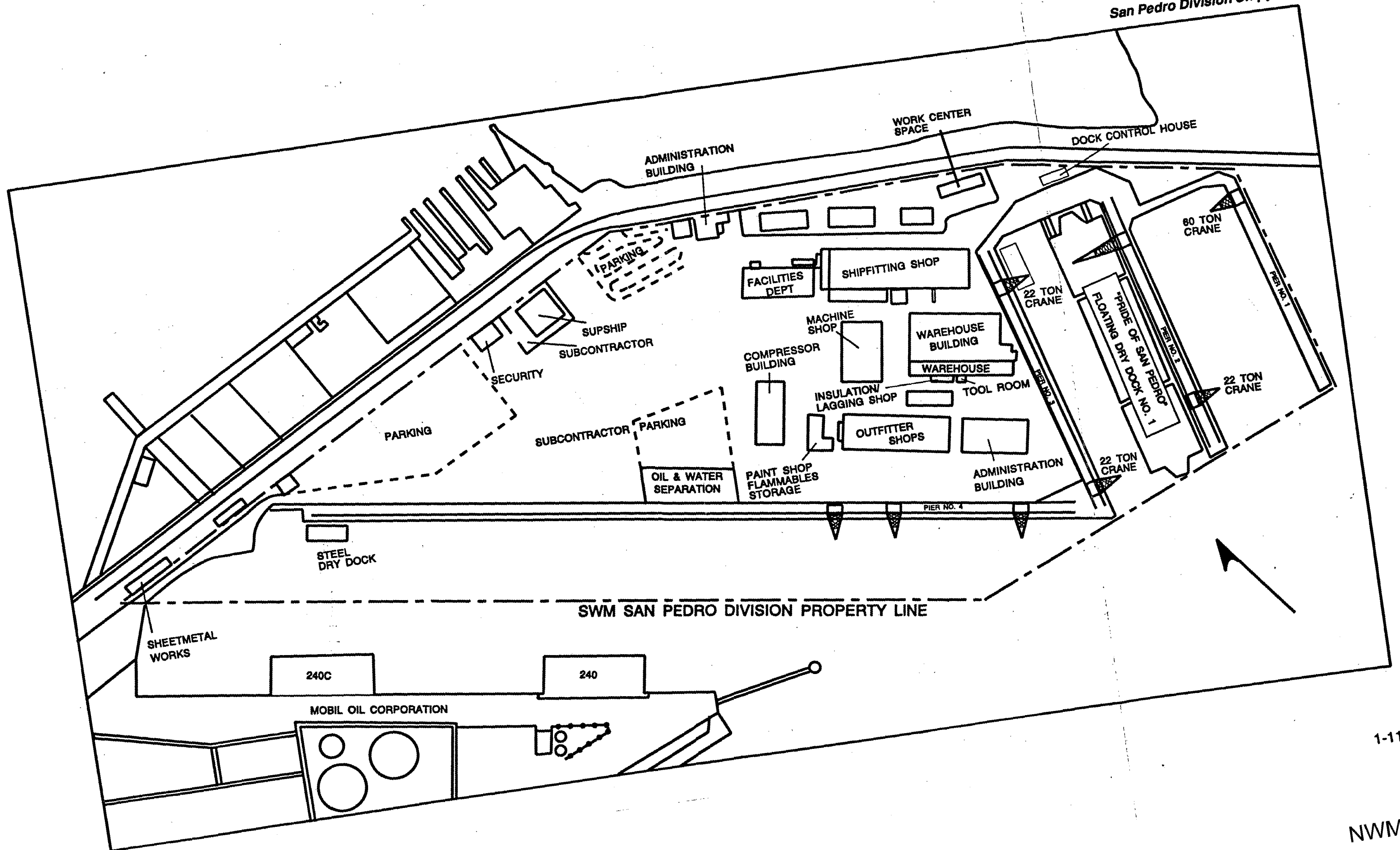


Exhibit (7b)
San Pedro Shop Equipment

RIGGING LOFT

| <u>SIZE</u> | <u>CRANES</u> |
|---------------|--|
| 5,000 SQ. FT. | 6 EA. 22 TON WHIRLEY TOWER CRANES 1 EA. 60 TON CLYDE TOWER CRANE 1 EA. 12 1/2 TON GALION CRANE |

STORAGE

| | |
|--------------|---------------------|
| (1) TOOLS | (1) 100 SQ. FT. |
| (2) MATERIAL | (2) 2000 SQ FT. (*) |

| | |
|----------------|--------------------------|
| <u>STAGING</u> | SEE MATERIAL STORAGE (*) |
|----------------|--------------------------|

MAJOR MACHINERY

| | |
|--------|---|
| 35 EA. | 1 TON CHAIN FALLS |
| 3 EA. | 12 TON CHAIN FALLS |
| 3 EA. | 10 TON CHAIN FALLS |
| 2 EA. | 8 TON CHAIN FALLS |
| 1 EA. | 40 TON CHAIN FALL |
| 2 EA. | 20 TON CHAIN FALLS |
| 2 EA. | 30 TON CHAIN FALLS |
| 1 LOT | SLINGS, SHACKLES, RIGGING GEAR, DOLLIES |
| 1 EA. | ZINC SMELTING FURNACE, JOHNSON |
| 1 EA. | CUT OFF MACHINE, 14", IDEAL |

| | | |
|------------------|--------|--------------------------------------|
| <u>SPECIAL</u> | 11 EA. | TEST WEIGHTS 5,125 LBS TO 32,102 LBS |
| <u>TEST</u> | | |
| <u>EQUIPMENT</u> | 1 LOT | DYNAMOMETERS TO 100,000 LBS. |
| | 1 EA. | HYDRAULIC COVERLEAF TESTER |

(*) NOTE: COMMON AREA SHARED BY MATERIAL STORAGE AND STAGING

SANDBLAST/PAINT SHOP

| <u>SIZE</u> | <u>CRANES</u> |
|-------------|---------------|
|-------------|---------------|

3,080 SQ. FT.

STORAGE

| | |
|--------------|-----------------|
| (1) TOOLS | (1) 600 SQ. FT. |
| (2) MATERIAL | (2) 500 SQ. FT. |

| | |
|----------------|---------------|
| <u>STAGING</u> | 2,000 SQ. FT. |
|----------------|---------------|

MAJOR MACHINERY

| | |
|--------|---|
| 2 EA. | WATER CURTAIN VAPOR RECOVERY BLOWERS |
| 1 EA. | SANDBLAST BOOTH SET UP FOR FOUR HOSES |
| 1 EA. | 8 TON SAND POT W/FOUR NOZZLES |
| 2 EA. | AIRLESS PAINT POTS GRACO 20:1 |
| 10 EA. | 2 TON WATERTIGHT SAND HOPPERS |
| 4 EA. | 5 GALLON PRESSURE POTS |
| 1 EA. | 35 TON SAND HOPPER |
| 1 EA. | PAINT BOOTH AREA |
| 1 LOT | SPRAY NOZZLES AND SANDBLAST NOZZLES AND ALL PERTINENT EQUIPMENT |

SHEETMETAL SHOP

| <u>SIZE</u> | <u>CRANES</u> |
|----------------|-----------------------|
| 12,280 SQ. FT. | 1 EA. 1 TON JIB CRANE |

STORAGE

| | |
|--------------|-------------------|
| (1) TOOLS | (1) 200 SQ. FT. |
| (2) MATERIAL | (2) 1,700 SQ. FT. |

| | |
|----------------|--------------|
| <u>STAGING</u> | 3,000 SQ FT. |
|----------------|--------------|

MAJOR MACHINERY

| | |
|-------|---|
| 1 EA. | PRESS BRAKE VERNON |
| 2 EA. | LOCKFORMER |
| 1 EA. | THROATLESS SHEARS 12 G.A. LENNOX |
| 1 EA. | IRONWORKER MOD "D" BUFFALO |
| 1 EA. | SPOTWELDER 50 KVA ACME |
| 2 EA. | BENCH GRINDER 1/3 H.P. BLACK AND DECKER |
| 1 EA. | DRILL PRESS #16 BUFFALO |
| 1 EA. | BAR FOLDER #4 NIAGRA |
| 1 EA. | RADIAL ARM DRILL CINCINNATI BICKFORD |
| 1 EA. | IRON WORKER #0 BUFFALO |
| 1 EA. | NIBBLING MACHINE #236 SAVAGE |
| 1 EA. | PEDESTAL GRINDER 5 H.P. STANDARD |
| 1 EA. | PEDESTAL GRINDER 1-1/2 H.P. AUTOSTART |
| 1 EA. | SQUARING SHEAR 3/16 GA. CINCINNATI |
| 1 EA. | PRESS BRAKE #50 CINCINNATI |
| 2 EA. | POWER ROLL #1447 PEXTO |
| 1 EA. | FOOT SHEAR NIAGRA |
| 1 EA. | HAND ROLLS NIAGRA |
| 1 EA. | HAND ROLLS 16 GA. NIAGRA |
| 1 EA. | HANDBRAKE #14 WHITNEY |
| 1 EA. | BENDING MACHINE #172 NIAGRA |
| 1 EA. | PLASMA CUTTING MACHINE |
| 1 EA. | HANDBRAKE NATIONAL |
| 1 EA. | PUNCH HYD. ROTE |

Exhibit (7c)
San Pedro Shop Equipment

| SHIPFITTER SHOP | | SHIPWRIGHT SHOP | |
|---|-----------------------------------|--|-----------------|
| SIZE | CRANES | SIZE | CRANES |
| 28,000 SQ. FT. | 4 EA. 5-TON OVERHEAD BRIDGE CRANE | 5,800 SQ. FT. | |
| STORAGE | | STORAGE | |
| (1) TOOLS | (1) 1,250 SQ. FT. | (1) TOOLS | (1) 100 SQ. FT. |
| (2) MATERIAL | (2) 3,000 SQ. FT. | (2) MATERIAL | (2) 300 SQ. FT. |
| STAGING | 10,700 SQ. FT. | STAGING | 1,000 SQ. FT. |
| MAJOR MACHINERY | | MAJOR MACHINERY | |
| 1 EA. PLATE ROLLS #8 HILLES-JONES | | 1 EA. 36" CUT OFF SAW IRVINGTON | |
| 1 EA. PRESS BRAKE #400 X 14' CINCINNATI | | 1 EA. TURNING LATHE 12" OLIVER | |
| 1 EA. HYDRAULIC PRESS CAMDEN (JOSHUA HANDY) | | 1 EA. 42" BAND SAW TANNEWITZ | |
| 1 EA. PLATE ROLLS POPE | | 1 EA. RADIAL ARM DRILL CINCINNATI | |
| 2 EA. BENDING SLAB 5' X 5' X 4 1/2" | | 1 EA. BAND SAW 36" TOWSLEY | |
| 1 EA. GATE SHEAR MOTOR DRIVE #8 BERTSCH | | 1 EA. PLANE 8" X 2' - 6" AMERICAN YATES | |
| 2 EA. FLAT CAR 8000 # CAPACITY CALLAHAN | | 1 EA. BAND SAW 36" AMERICAN | |
| 1 EA. BAND SAW #8 MARVEL | | 1 EA. DRILL PRESS #18 BUFFALO | |
| 1 EA. PRESS BRAKE #T-TA VERSION | | 1 EA. BENCH GRINDER CINCINNATI | |
| 1 EA. SQUARING SHEAR 10' X 3/8 NIAGRA | | 1 EA. CIRCULAR CUT-OFF SAW 12" DEWALT | |
| 1 EA. STEEL SHEAR #1808 CINCINNATI | | 1 EA. TABLE SANDING MACHINE 12" DELTA | |
| 1 EA. DISC GRINDER #6 GARDNER | | 1 EA. TABLE SAW 14" DELTA | |
| 1 EA. PEDESTAL GRINDER 5 H.P. STANDARD | | 1 EA. TABLE SAW 10" DELTA | |
| 1 EA. PEDESTAL GRINDER 2 H.P. STANDARD | | 1 EA. JIGSAW 10" KALAMAZOO | |
| 1 EA. PEDESTAL GRINDER 2 H.P. CINCINNATI | | 1 EA. DUST COLLECTION SILO WITH COLLECTION SYSTEM | |
| 1 EA. CONTOUR MACHINE AND CAB DO ALL | | 1 EA. DOWLING MACHINE DELTA | |
| 1 EA. IRON WORKER #1 1/2 UNIVERSAL BUFFALO | | 1 EA. BAND SAW 14" #6 DELTA | |
| 1 EA. KIOKE SANS FLAME SHAPE CUTTING MACHINE | | 1 EA. TABLE SAW 8" #3 DELTA | |
| 19 EA. 300 AMP WELDING MACHINE WESTINGHOUSE | | 2 EA. JOINTER 6" #5 DELTA | |
| 1 EA. 500 AMP WELDING MACHINE WESTINGHOUSE | | 1 LOT ASSORTED WOODWORKING TOOLS AND SMALL EQUIPMENT | |
| 5 EA. GAS DRIVE D.C. 250 AMP WELDER WESTINGHOUSE | | 1 LOT PORTABLE SCAFFOLD (STAGING) | |
| 1 EA. POWER SOURCE 1500 AMP LINCOLN/IDEALARC LT-7 TRACTOR | | | |
| 1 EA. TIG UNIT 300 AMP LINCOLN | | | |
| 1 EA. GAS DRIVE D.C. 400 AMP LINCOLN | | | |
| 1 EA. POWER SUPPLY 300 AMP WITH COBRAMATIC GUN LINDE | | | |
| 1 EA. POWER SUPPLY 1500 AMP WITH 8 2 LEAD WELDING UNITS | | | |
| 2 EA. MIGET GUNS AIRCOMATIC | | | |

Exhibit (8)
San Pedro Division Production Manpower

| | PRODUCTION CRAFTS | | | | | | PROD * SUPPORT | TOTAL |
|---|-------------------|------|------|-------|----------------|-------|-------------------|-------|
| | STRUCT | MACH | PIPE | ELECT | SHEET METAL | OTHER | | |
| PERSONNEL CURRENTLY ON-BOARD | 83 | 62 | 75 | 34 | 42 | 242 | 110 | 648 |
| SOURCES: RECALL FROM LAYOFF | 120 | 90 | 100 | 60 | 60 | 320 | 25 | 775 |
| UNSOLICITED APPLICATIONS | 198 | 89 | 203 | 75 | 22 | 628 | 60 | 1,213 |
| LOCAL LABOR MARKET ** | 300 | 250 | 300 | 250 | 150 | 800 | 155 | 2,050 |
| NOTES: * INDIRECT PERSONNEL ** CURRENT INFORMATION SUPPLIED BY CALIFORNIA EMPLOYMENT DEPARTMENT | | | | | | | | |

SAN FRANCISCO DIVISION

The San Francisco division is located on the San Francisco waterfront, convenient to all local Navy facilities. This division has direct access to the open ocean, drydocking capabilities to 59,000 long tons, crane support to 50 tons, and the full range of temporary services available. Exhibit (9) displays an overview of the San Francisco facilities showing administrative, production, pier, and drydock assets. Exhibit (10) displays the major shop equipment available to support the program. Exhibit (11) displays the division's current production manpower.

Drydock No. 1 would be utilized during the T-AGOS drydock/overhaul project. The lifting capacity rating is 21,000 long tons with a minimum freeboard of 12 inches. Its length is 654 feet overall with a breadth overall of 128 feet and a breadth between wingwalls of 100 feet.



Exhibit (10)
San Francisco Production Shops

MACHINE SHOP

| | |
|------------------|---------------|
| <u>SHOP SIZE</u> | <u>CRANES</u> |
|------------------|---------------|

| | |
|----------------|----------|
| 23,100 SQ. FT. | 4-8 TON |
| | 2-20 TON |
| | 2-30 TON |

MAJOR MACHINERY

- 1 EA. GRAY OPENSIDE PLANER 96" X 108 X 30"
- 1 EA. GRAY OPENSIDE PLANER 48" X 48" X 16"
- 1 EA. 10' RADIAL DRILL
- 1 EA. 6' RADIAL DRILL
- 1 EA. 7" HORIZONTAL BORING MILL
- 2 EA. 62" VERTICAL BORING MILL
- 2 EA. 100" VERTICAL BORING MILL
- 2 EA. 48" X 76" ENGINE LATHE
- 1 EA. 60" X 48" HEAVY DUTY ENGINE LATHE
- 1 EA. 60" X 30" HEAVY DUTY ENGINE LATHE
- 1 EA. 72" DRAW CUT PLANER
- 1 EA. 30" VERTICAL TURNING AND BORING TOOL
- 3 EA. VARIABLE HORIZONTAL BORING MILL
- 1 EA. 6' X 14' PLANER-MILLER
- 1 EA. 86" X 48" HEAVY DUTY ENGINE LATHE
- 1 EA. 48" X 30" ENGINE LATHE
- 1 EA. 48" X 30" ENGINE LATHE
- 1 EA. (LOT) DRILL PRESS GRINDERS, BENCH SAWS, WELDING AND BURNING EQUIPMENT

PIPE SHOP

| | |
|------------------|---------------|
| <u>SHOP SIZE</u> | <u>CRANES</u> |
|------------------|---------------|

| | |
|-------------|----------|
| 7,440 SQ FT | 4-5 TON |
| | 2-20 TON |
| | 2-30 TON |

MAJOR MACHINERY

- 1 EA. 100 TON HYDRAULIC PRESS
- 1 EA. 10' PLATE ROLL
- 1 EA. 8" HYDRAULIC PIPE BENDER
- 1 EA. 6" HYDRAULIC PIPE BENDER
- 1 EA. 3" HYDRAULIC PIPE BENDER
- 1 EA. 2" HYDRAULIC PIPE BENDER
- 1 EA. 6" THREADING MACHINE
- 12 EA. 1" THREADING MACHINE
- 1 EA. LEBLOND REGAL LATHE, VARIABLE SPEED
- 1 EA. MARVEL BANDSAW
- 1 EA. (LOT) VICES, WORK BENCHES, DRILLS, SANDING & GRINDING MACHINES, WELDING MACHINES

STRUCTURAL SHOP

| | |
|------------------|---------------|
| <u>SHOP SIZE</u> | <u>CRANES</u> |
|------------------|---------------|

| | |
|--------------|----------|
| 19,000 SQ FT | 2-7 TON |
| | 1-20 TON |

MAJOR MACHINERY

- 1 EA. 500 TON HYDRAULIC PLATE BENDER
- 1 EA. 500 TON HYDRAULIC PRESS
- 1 EA. 500 TON PLATE JOGGLER
- 1 EA. 1,200 TON PRESS BRAKE
- 1 EA. 40' PLATE PLANER
- 1 EA. 32' PLATE ROLLS
- 1 EA. 4' RADIAL DRILL
- 1 EA. 70' FLAME PLANER
- 1 LOT DRILL PRESS, SAWS GRINDERS WELDING & BURNING EQUIPMENT

ELECTRICAL SHOP

| | |
|------------------|---------------|
| <u>SHOP SIZE</u> | <u>CRANES</u> |
|------------------|---------------|

| | |
|-------------|--|
| 8,560 SQ FT | |
|-------------|--|

MAJOR MACHINERY

- 1 EA. PLATING LATHE
- 1 EA. MACHINE LATHE
- 1 EA. BANDSAW
- 1 EA. BENCH GRINDER
- 1 EA. BEAD BLASTER
- 1 EA. DRILL PRESS 1/2" CAPACITY
- 1 EA. 5,000 KW SALT BOX
- 1 EA. 300 KW SALT BOX
- 1 EA. 777MCM SALT BOX CABLE, 4,800'
- 1 EA. PHOTOACHOMETER
- 2 EA. VIBRATION ANALYZER
- 4 EA. MEGGARS 550V
- 2 EA. V.O.M. DIGITAL
- 5 EA. V.O.M. SIMPSON
- 3 EA. AMMETERS CLAMP-ON 0-1000 AMPS
- 1 EA. AMPTRON 10:1 COIL
- 6 EA. AMPROBE METERS 0-300 AMPS
- 1 EA. CYCLE METER 0-450
- 1 EA. HYPOT
- 2 EA. STROBE-D SCOPE
- 1 EA. PYROMETER 0-250' TEMP INDICATOR
- 2 EA. TWIN HEAT MODULES
- 2 EA. HIGH AMP SWITCHING CONTRACTS
- 1 EA. HYDRAULIC PRESS
- 1 EA. SOLVENT TANK
- 1 EA. BEARING INDUCTION HEATER
- 1 EA. SURGE TESTER
- 3 EA. POWER SUPPLIES 1 AT 400.1 AT 2,000 AMP DC
- 1 EA. (LOT) SMALL TOOLING METERS, THERMOMETERS

SHEETMETAL SHOP

| | |
|------------------|---------------|
| <u>SHOP SIZE</u> | <u>CRANES</u> |
|------------------|---------------|

| | |
|--------------|--|
| 12,000 SQ FT | |
|--------------|--|

MAJOR MACHINERY

- 1 EA. JERSON POWER PRESS, T-SUA
- 2 EA. POWER PRESS BRAKE
- 1 EA. PEDESTAL GRINDER
- 3 EA. GRINDER
- 1 EA. STANLEY GRINDER
- 1 EA. BELT SANDER
- 2 EA. BUFFALO IRON WORKER
- 1 EA. WHITNEY PUNCH PRESS
- 1 EA. BLISS PUNCH
- 2 EA. PEXTO POWER ROLL
- 1 EA. RADIAL DRILL
- 1 EA. BUFFALO DRILL, NO. 15
- 1 EA. BUFFALO DRILL, NO. 16
- 1 EA. DRILL PRESS
- 1 EA. WHITNEY MANUAL BRAKE
- 1 EA. CHICAGO MANUAL BRAKE
- 1 EA. PAN BRAKE
- 1 EA. CLEAT BENDER
- 2 EA. ROTEX PUNCH
- 4 EA. MANUAL ROLL

Exhibit (11)
San Francisco Division Production Manpower

| | PRODUCTION CRAFTS | | | | | | PROD * SUPPORT | TOTAL |
|---|-------------------|------|------|-------|----------------|-------|-------------------|-------|
| | STRUCT | MACH | PIPE | ELECT | SHEET METAL | OTHER | | |
| PERSONNEL CURRENTLY ON-BOARD | 42 | 13 | 23 | 6 | 4 | 74 | 47 | 209 |
| SOURCES: RECALL FROM LAYOFF | 420 | 300 | 120 | 200 | 80 | 513 | 50 | 1,683 |
| UNSOLICITED APPLICATIONS | 40 | 50 | 35 | 40 | 30 | 75 | 100 | 370 |
| LOCAL LABOR MARKET ** | 800 | 750 | 250 | 500 | 200 | 800 | 500 | 3,800 |
| NOTES: * INDIRECT PERSONNEL ** CURRENT INFORMATION SUPPLIED BY CALIFORNIA EMPLOYMENT DEPARTMENT | | | | | | | | |

PORTLAND DIVISION

The Portland, Oregon division, Northwest Marine (NWM), is located on the Willamette River, at the Portland Ship Repair Yard (PSRY). NWM maintains its own production shops and administrative areas, but leases drydock and pier space from PSRY. Exhibit (12) provides an overview of the NWM/PSRY facility, which has three drydocks to 81,000 tons, crane service to 120 tons, and full temporary services support. Exhibit (13) displays the major shop equipment available to support the program. Exhibit (14) displays the current production manpower for NWM. The extensive transportation fleet of trucks, buses, mobile offices, and other portable support equipment maintained at all Southwest Marine divisions is particularly important to NWM since it allows that division to support pierside repair programs in the Seattle area, which is only a three hour drive from Portland.

Drydock No. 1 would be utilized during the T-AGOS drydock/overhaul project. The lifting capacity rating is 14,000 long tons with a 6 foot freeboard. Its length is 598 feet overall with a clear width between wingwalls of 88 feet.

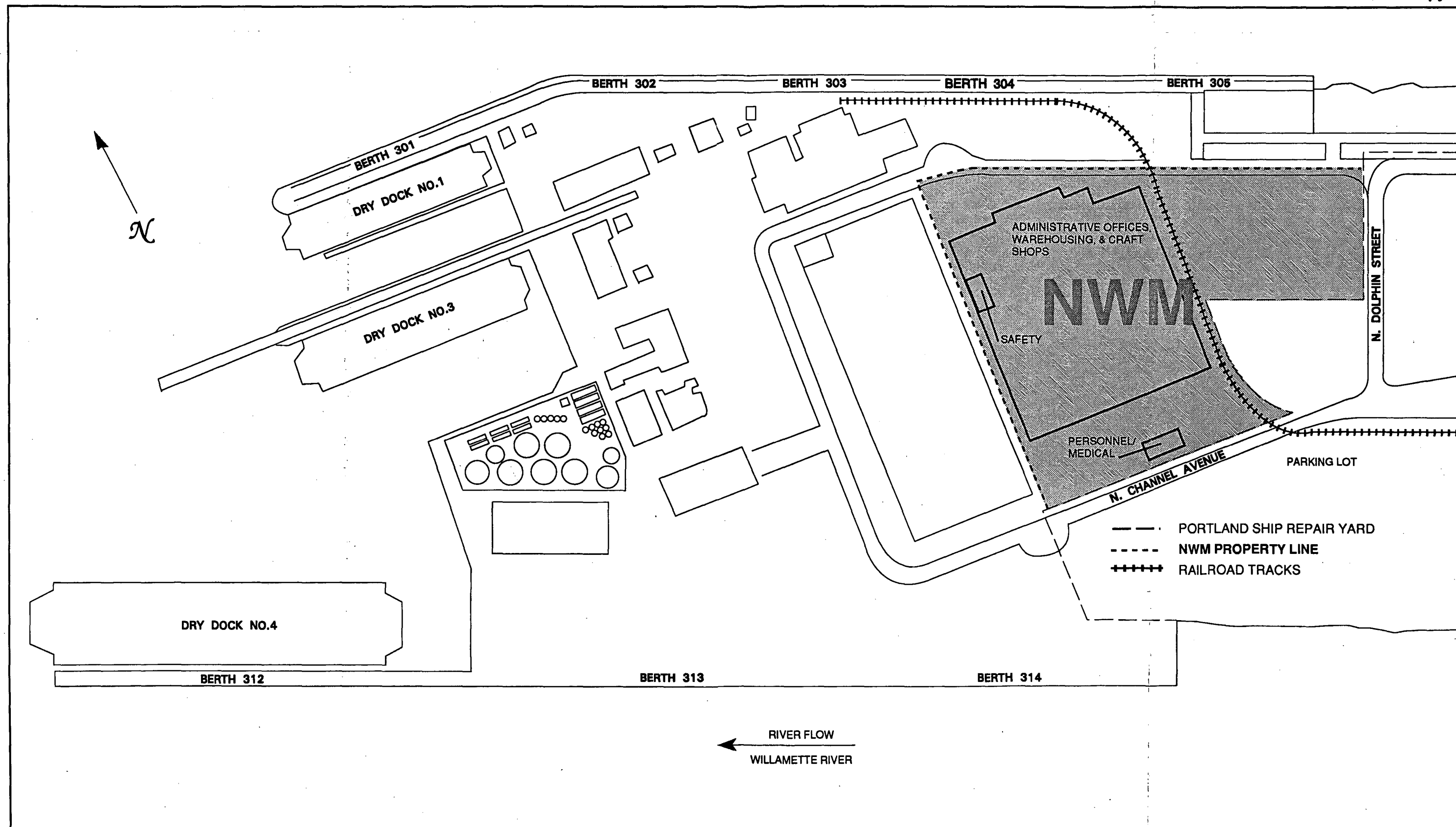


Exhibit (13a)
Portland Shop Equipment

| | | | |
|---|---|--|--|
| MACHINE SHOP | | PIPE SHOP | |
| <u>SHOP SIZE</u> | <u>CRANES</u> | <u>SHOP SIZE</u> | <u>CRANES</u> |
| 30,000 SQ FT | 3-5 TON OVERHEAD BRIDGE CRANES 1-20 TON OVERHEAD BRIDGE CRANE 14-2 TON, 2-5 TON JIB BOOMS | 30,000 SQ FT | 1-5 TON OVERHEAD BRIDGE CRANE 1-10 TON OVERHEAD BRIDGE CRANE 6-2 TON JIB BOOMS |
| <u>STORAGE</u> | | <u>STORAGE</u> | |
| (1) TOOLS | (1) 2,300 SQ FT AND 192 SQ FT PORTABLE TRAILER | (1) TOOLS | (1) 1,440 SQ FT AND 192 SQ FT PORTABLE TRAILER |
| (2) MATERIAL | (2) 5,170 SQ FT | (2) MATERIAL | (2) 2,764 SQ FT |
| <u>LAYDOWN AREA</u> | 3,000 SQ FT OF BREEZEWAY AND 5,000 SQ FT OF SHOP FLOOR | <u>LAYDOWN AREA</u> | 6,000 SQ FT OF BREEZEWAY AND 5,000 SQ FT OF SHOP FLOOR |
| <u>MAJOR MACHINERY</u> | | <u>MAJOR MACHINERY</u> | |
| 1 EA. STEP TOE SHAPER | | 1 EA. RIGID 635 THREADER | |
| 1 EA. RADIAL DRILLS | | 1 EA. RIGID 444 THREADER | |
| 1 EA. PLAIN MILL | | 1 EA. OSTER THREADER | |
| 1 EA. BRIDGEPORT MILL | | 1 EA. TILTING ARM BAND SAW | |
| 1 EA. LATHES | | 1 EA. ABRASIVE CUT-OFF | |
| 1 EA. NIBBLER | | 1 EA. BENCH GRINDER | |
| 1 EA. HORIZONTAL BORING MILL | | 1 EA. BENCH BUFFER | |
| 1 EA. HARD SEAT SURFACE GRINDER | | 2 EA. ENERPAC BENDER | |
| 1 EA. VALVE TEST BENCH TO 2" 3000 PSI | | 1 EA. ZERO PEEN SANDBLASTER | |
| 1 EA. VALVE TEST BENCH TO 2"-30" 1600 PSI | | 1 EA. WELDING POSITIONERS: 300, 2500, AND 3000 LB. CAP. | |
| 1 EA. HYDRAULIC PRESS | | 1 EA. TURNING ROLLS 2000 LB. CAP. | |
| 1 EA. PEDESTAL GRINDER | | 1 EA. PANQUIRIS WELDING POSITIONER | |
| 1 EA. FRICTION CUT-OFF SAW | | 1 EA. TITANIUM WELDING BOOTH | |
| 1 EA. METAL BAND SAW | | 1 EA. HELIASIC WELDER | |
| 1 EA. 7" CARBIDE TOOL GRINDER | | 1 EA. PLASMA CUTTING EQUIPMENT | |
| 1 EA. 6" BENCH GRINDER | | 1 EA. 3000 PSIG HYDRO TEST STAND | |
| 1 EA. 3 STAGE HYDRAULIC FLUSHING AND TESTING UNIT | | | |
| 1 EA. DRILL SHARPENER | | | |
| 1 EA. TOOL GRINDER | | | |
| <u>TEST EQUIPMENT</u> | | <u>TEST EQUIPMENT</u> | |
| (1) FACILITIES | ENVIRONMENTALLY CONTROLLED CALIBRATION LABORATORY CONFIGURED TO NATIONAL BUREAU OF STANDARDS REQUIREMENTS | (1) FACILITIES | EIGHT WELDER CERTIFICATION TEST BOOTHS. ONE 3000 PSIG HYDRO TEST STAND. |
| (2) SPECIAL | VALVE TEST STAND TO 30" @ 1500 PSI. PUMP TEST STAND WITH CERTIFIED POWER SUPPLY. 1000 GPM CAPACITY FOR ANY MEDIUM, CALIBRATED FLOW TANKS | | |
| | | STRUCTURAL SHOP | |
| | | <u>SHOP SIZE</u> | <u>CRANES</u> |
| | | 45,000 SQ FT | 2-20 TON OVERHEAD BRIDGE CRANES |
| | | <u>STORAGE</u> | |
| | | (1) TOOLS | (1) 2,300 SQ FT |
| | | (2) MATERIAL | (2) 800 SQ FT |
| | | <u>LAYDOWN AREA</u> | EIGHT ACRES ADJACENT TO BAY AND 5,000 SQ FT OF SHOP FLOOR |
| | | <u>MAJOR MACHINERY</u> | |
| | | 1 EA. | AUDIOGAUGING EQUIPMENT |
| | | 1 EA. | DRILL PRESS |
| | | 1 EA. | 8"X10" BENCH GRINDERS |
| | | 1 EA. | PRESS |
| | | 1 EA. | BURNING MACHINES |
| | | 1 EA. | VAC-U LIFT MACHINES |
| | | 1 EA. | 20' PLATE ROLL |
| | | 1 EA. | 300 AMP SHORT ARC WELDER |
| | | 1 EA. | HOLE PUNCH |
| | | 1 EA. | BAND SAWS |
| | | 1 EA. | ALUMINUM WELDERS |
| | | 1 EA. | SUB-ARC WELDERS |
| | | 1 EA. | DOODLEBUG |
| | | 1 EA. | 1500 TON 30' PRESS BRAKE |
| | | 1 EA. | 20' SHEAR |

Exhibit (13b)
Portland Shop Equipment

ELECTRICAL SHOPSHOP SIZE CRANES

15,000 SQ FT 1-10 TON OVERHEAD BRIDGE CRANE
 1-5 TON OVERHEAD CRANE

STORAGE

(1) TOOLS (1) 2,000 SQ FT (ENCLOSED/LOCKABLE)
 (2) MATERIALS (2) 2,325 SQ FT (ENCLOSED/LOCKABLE)

LAYDOWN 3,000 SQ FT OF BREEZEWAY AND
AREA 3,000 SQ FT OF SHOP FLOOR

MAJOR MACHINERY

1 EA. ADDRESSOGRAPH MACHINE
 1 EA. AC DC MG TEST PANEL
 1 EA. GRINDERS
 1 EA. WELSAW BAND SAW
 1 EA. MILLER WELDER 400 AMP
 1 EA. DISPATCH OVEN
 1 EA. ROOVERS TAPE WRITER
 1 EA. DRILL PRESSES
 1 EA. TRINCO DRY BLASTER
 1 EA. CROSS CUT SAW
 1 EA. OXYGEN/ACETYLENE TANKS
 1 EA. RIGID PIPE THREADER
 2 EA. 2000 KW SALT BOX

TEST EQUIPMENT

(1) FACILITIES ELECTRONIC TEST BENCHES WITH AC/DC POWER
 SUPPLY. TWO 2,000 KW SALT BOXES

 (2) SPECIAL 1,500 SQ FT CONTROLLER OVERHAUL FACILITY
 BAKE OVENS

SHEETMETAL SHOPSHOP SIZE CRANES

15,000 SQ FT 1 OVERHEAD BRIDGE CRANE

STORAGE

(1) TOOLS (1) 700 SQ FT (ENCLOSED/LOCKABLE)
 (2) MATERIAL (2) 300 SQ FT (ENCLOSED/LOCKABLE)

LAYDOWN 3,000 SQ FT OF BREEZEWAY AND
AREA 3,000 SQ FT OF SHOP FLOOR

MAJOR MACHINERY

1 EA. 600 AMP WELDERS
 1 EA. 35 TO 480 AMP MIG WELDER
 1 EA. PA-3A WIRE FEED
 1 EA. MIDGET WIRE FEED
 1 EA. PORTABLE MIG WELDER
 1 EA. MUBBA IRON MARKER
 1 EA. 12 X 200 TON PRESS
 1 EA. 1/4" X 10' SHEAR
 1 EA. METAL BAND SAW
 1 EA. 1/2" BENCH DRILLS
 1 EA. 1/2" STANDING DRILL
 1 EA. FLANGE PUNCH
 1 EA. 64" POWER ROLL
 1 EA. 34" HAND ROLL
 1 EA. 36" HAND ROLL
 1 EA. NIBBLER
 1 EA. SPOT WELDER
 1 EA. 48" BOX BRAKE
 1 EA. GRINDERS
 1 EA. SANDERS
 4 EA. PLASMA CUTTERS

TEST EQUIPMENT

SPECIAL FLOW HAND VELOMETER, CYCLOMETER,
 ANOMETER (ALL CALIBRATED)

- NOTE:
1. ALL LISTED MACHINERY AND SPECIAL EQUIPMENT IS PERMANENTLY OWNED BY NORTHWEST MARINE, INC.
 2. WORK NEEDING SPECIAL EQUIPMENT NOT OWNED BY NORTHWEST MARINE, INC. WILL BE SUBCONTRACTED OR SPECIAL TOOLS WILL BE LEASED.

Exhibit (14)
Portland Division Production Manpower

| | PRODUCTION CRAFTS | | | | | | PROD * SUPPORT | TOTAL |
|---|-------------------|------|------|-------|----------------|-------|-------------------|-------|
| | STRUCT | MACH | PIPE | ELECT | SHEET METAL | OTHER | | |
| PERSONNEL CURRENTLY ON-BOARD | 212 | 83 | 125 | 89 | 75 | 190 | 92 | 846 |
| SOURCES: RECALL FROM LAYOFF | 173 | 122 | 115 | 50 | 58 | 257* | N/A | 775 |
| UNSOLICITED APPLICATIONS | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| LOCAL LABOR MARKET ** | 450 | 150 | 175 | 11 | 192 | 293* | N/A | 1,271 |
| NOTES: * INDIRECT PERSONNEL ** CURRENT INFORMATION SUPPLIED BY CALIFORNIA EMPLOYMENT DEPARTMENT | | | | | | | | |

MAIL PAYMENT TO: P.O. BOX 4000-58 • PORTLAND • OREGON • 97208



INVOICE

M/V WASHINGTON STAR and Owners
c/o Leonid Maritime Corporation
131 Filanos Street
Piraeus, Greece 185 36

DATE December 20, 1991
OUR JOB NO. 4387
CUSTOMER'S ORDER NO.
CONTRACT NO.
INVOICE NO. 2207.01
TERMS Net upon receipt
of invoice

CUSTOMER CODE NUMBER:

Duns No. 00-902-8580

M/V WASHINGTON STAR

Estimated Final Costs

\$ 165,231.00

Less 25%

\$ 41,308.00

Total Amount Due This Invoice

\$ 123,923.00

Approved

A. N. Kalogiannis

Make wire transfer of funds to:
Southwest Marine, Inc.
c/o Northwest Marine, Inc.
First Interstate Bank of Oregon
N.W. 29th and Yeon Branch
P.O. Box 10172
Portland, Oregon 97210
Account No. 552-001522-9
ABA #123-000123

PAST DUE PAYMENTS SHALL BEAR INTEREST AT THE HIGHEST LAWFUL RATE UNTIL REPaid, NOT TO EXCEED 1 1/2% PER MONTH

CORRESPONDENCE ADDRESS : P.O. BOX 3108 • PORTLAND • OREGON • 97208 PHONE: (503) 285-7557

NWMAR130714

MAIL PAYMENT TO: P.O. BOX 4000-58 • PORTLAND • OREGON • 97208



INVOICE

M/V WASHINGTON STAR and Owners
c/o Leond Maritime Corporation
131 Filanos Street
Piraeus, Greece 185 36

DATE December 20, 1991
OUR JOB NO. 4387
CUSTOMER'S ORDER NO.
CONTRACT NO.
INVOICE NO. 2207.01
TERMS Net upon receipt
of invoice

CUSTOMER CODE NUMBER:

Duns No. 00-902-8580

M/V WASHINGTON STAR

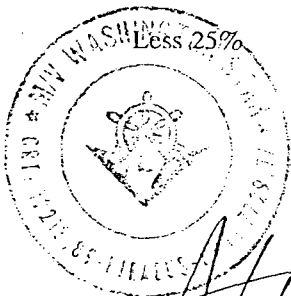
Estimated Final Costs

\$ 165,231.00

\$ 41,308.00

Total Amount Due This Invoice

\$ 123,923.00



Approved

A. R. Kalogiannis

SUBJECT TO OWNER'S APPROVAL

Make wire transfer of funds to:
Southwest Marine, Inc.
c/o Northwest Marine, Inc.
First Interstate Bank of Oregon
N.W. 29th and Yeon Branch
P.O. Box 10172
Portland, Oregon 97210
Account No. 552-001522-9
ABA #123-000123

PAST DUE PAYMENTS SHALL BEAR INTEREST AT THE HIGHEST LAWFUL RATE UNTIL REPAID. NOT TO EXCEED 1 1/2% PER MONTH

CORRESPONDENCE ADDRESS : P.O. BOX 3108 • PORTLAND • OREGON • 97208 PHONE: (503) 285-7557

NWMAR130715



TO: Art Engel, *Art Engel*
FROM: Bill Zavín *BZ*
DATE: April 5, 1991
SUBJECT: Commercial Contracting Update

Update from San Francisco Division, USCG BLACKHAW drydocked Monday April 1, 1991. SEALIFT ARCTIC will be engaged in yard work from March 26th through April 2, 1991. A small job on BARGE 18 was completed for Harbor Tug and Barge (Crowley). Currently Bob Hubbard has a marketing trip planned to New Jersey/New York during April, the 9th through the 18th. A trip report will be distributed upon his return.

San Pedro Division pierside work on the USS PRINCETON scheduled to commence in July. Keystone has some work coming up in the San Pedro area which Matthew is pursuing. He is also pursuing some work on the EXXON NEW ORLEANS which is berthing in our facility.

San Diego: Alex and Matthew are planning a trip to Ingalls in Avondale in the near future. Pemex work appears to still be problematical to forecast. You are better acquainted than I with the other San Diego activities

Portland work continues on TUSTUMENA and EXXON BENICIA. Bill Johnston and I look forward to meeting Dan Paul, new Fleet Operations Manager of Exxon Shipping next week. They will be in town on the 10th, 11th and 12th. REGENT SEA and REGENT STAR Owner's Representatives will be in Portland the week of April 15th to define their work package. PACIFIC PRINCESS will be drydocked in Portland by Northwest May 19th through 29th.

Quintin will be in Europe for 3 weeks commencing April 8th. He will visit with P & O on the FAIR PRINCESS and DAWN PRINCESS projects. I have renewed our invitations to Carnival, P & O and Cunard for tours of VIKING SERENADE.

I have received a positive response to the idea of sharing appropriate information between Carlos Agnese and myself. We thought our first visit would be best done on the West Coast so that he might see our work on VIKING SERENADE and carry the word of this project throughout his travels in the future. I specifically request your continued endorsement of this process before he and I formally set the time and place.

I have had continuing discussions relative to SWATH which continue to appear promising. I learned that a potential temporary user of a proposed SWATH vessel which will ultimately be destined for Hawaii service is your own Harbor Excursion Cruises. I would appreciate a confirmation of this to help me assess the creditability of the potential leads under consideration.

Memorandum -- Art Engel
April 5, 1991
Page 2

I have spoken with Herb Leyendecker of Exxon Shipping and we have agreed that the presentation planned for Dan Paul and Herb should take place after we have had a mutual lessons learned on EXXON BENICIA. As an important note, each comment I get from Bob Tompkins and Herb Leyendecker continue to very positive about both our Company's approach and the work being done on the project.

Bill Johnston suggested to me this morning that the time could well be right for another series of reception/luncheons with special customers and their key personnel on the East Coast. He told me about the successes you had in the past and I wholeheartedly agree with him on timing and strategy. He and I thought that if we could arrange a mutually acceptable time this Spring, that we could have the following areas covered: New York City, New Jersey, Philadelphia, and possibly Houston and Cleveland. It would be our thought to have both of you, Carl, David, Bill, Quintin, Bob Hubbard, and myself host these reception/luncheons. I would appreciate your reactions to this and if they are positive reactions, some ideas on scheduling.

cc: General Managers

ⓧ

NWMAR130717

PORT OF PORTLAND DRY DOCK AND BERTHAGE SCHEDULE

DATE: 4/17/91

| VESSEL | CONT. | DATE IN | DATE OUT | ORD'D BY | LOA | BEAM | TONS |
|--------------------|-------|-----------|-----------|-----------|-----|------|-------|
| ===== | | | | | | | |
| DRY DOCK #4 | | | | | | | |
| ===== | | | | | | | |
| # EXXON LONG BEACH | CG | 24-Apr-91 | 05-May-91 | DONALDSON | 987 | 166 | 94999 |
| REGENT SEA | NWM | 03-May-91 | 09-May-91 | COLEMAN | 630 | 82 | 17234 |
| # REGENT SEA | CG | 06-May-91 | 12-May-91 | DONALDSON | 630 | 82 | 17234 |
| CHEVRON ARIZONA | WSI | 13-May-91 | 22-May-91 | WILLIAMS | 650 | 96 | 16941 |
| ARTIC HUNTER | WSI | 23-May-91 | 28-May-91 | WILLIAMS | 930 | 133 | 57834 |
| SANSINENA II | NWM | 03-Jun-91 | 08-Jun-91 | COLEMAN | 810 | 105 | 35633 |
| OMI COLUMBIA | NWM | 10-Jun-91 | 14-Jun-91 | COLEMAN | 890 | 145 | 67856 |
| CHESAPEAKE TRADER | WSI | 17-Jun-91 | 21-Jun-91 | WILLIAMS | 659 | 106 | 24669 |
| COAST RANGE | NWM | 15-Jul-91 | 19-Jul-91 | COLEMAN | 659 | 100 | 21357 |
| # DELAWARE TRADER | WSI | 22-Jul-91 | 26-Jul-91 | WILLIAMS | 659 | 106 | 24669 |
| SIERRA MADRE | NWM | 05-Aug-91 | 11-Aug-91 | COLEMAN | 659 | 100 | 21351 |
| CORNUCOPIA | NWM | 03-Sep-91 | 08-Sep-91 | COLEMAN | 628 | 90 | 21688 |
| * DAWN PRINCESS | NWM | 14-Sep-91 | 21-Sep-91 | COLEMAN | 608 | 82 | 16666 |
| REGENT STAR | NWM | 16-Sep-91 | 01-Oct-91 | COLEMAN | 643 | 81 | ---- |
| *#REGENT STAR | CG | 16-Sep-91 | 01-Oct-91 | DONALDSON | 643 | 81 | ---- |
| * FAIR PRINCESS | NWM | 22-Sep-91 | 29-Sep-91 | COLEMAN | 608 | 82 | 16727 |
| * JUBILEE | NWM | 01-Oct-91 | 09-Oct-91 | COLEMAN | 738 | 93 | 47262 |
| ARCO ANCHORAGE | NWM | 09-Oct-91 | 15-Oct-91 | COLEMAN | 883 | 138 | 57691 |
| * B.T. SAN DIEGO | NWM | 15-Oct-91 | 25-Oct-91 | COLEMAN | 953 | 166 | 83650 |
| * SAGAFJORD | NWM | 15-Nov-91 | 29-Nov-91 | COLEMAN | 620 | 80 | 24474 |
| ===== | | | | | | | |

INDICATES NEW ADDITION OR CHANGE SINCE LAST ISSUE OF SCHEDULE

* INDICATES BID JOB



Via Fax

September 22, 1992

Storm & Bull Ltd.

Attention: Mr. Henrik Hansen

Subject: M/V TUNDRA KING..TUNDRA PRINCESS..TUNDRA QUEEN

With reference to your facsimile message received earlier today, please be advised that we will require the following number of working days to accomplish the specified work for the subject vessels...

1. M/V TUNDRA KING.....SEVEN (7)
2. M/V TUNDRA PRINCESS.....SIX (6)
3. M/V TUNDRA QUEEN.....SIX (6)

For all vessels the scope of work as specified is not very much and days are dependent on the final scope of grit blasting and coatings.

We would assume that for this short of time vessels will remain on dock for duration.

Regards,

George Riddle
Chief Estimator
Corporate Commercial Accounts

c.c. Bob Hubbard/ Carl Hansen via fax.

NORTHWEST MARINE
PRICE SUMMARY

14-Feb-91

VESSEL:
OWNER:CUNARD COUNTESS
CUNARD

| ITEM | TITLE | PRICE |
|------|---|---------|
| 1 | INSULATION REMOVAL | |
| | erect stagings to reach deckhead | 23,742 |
| | remove sheathing | 17,214 |
| | remove & dispose of AB insulation | 59,524 |
| 2 | CLEANING | |
| | wash down complete E.R. | 27,248 |
| | dispose of washings w/AB residual | 27,951 |
| 3 | ENGINE STRIP DOWN | |
| | disconnect & remove all external piping | 47,750 |
| | electrical components | 28,530 |
| | turbo chargers | 22,752 |
| | cylinder covers | 17,094 |
| | other misc. items | 24,174 |
| 4 | REMOVE INTERFERENCES, STB. SIDE | |
| | sewage tank | 13,382 |
| | sewage pumps | 8,548 |
| | air compressors (2) | 9,491 |
| | circ.pumps (2) | 8,548 |
| | sea valve & strainer | 6,661 |
| | piping items | 16,151 |
| | electrical items | 11,436 |
| | catwalks (all) | 17,094 |
| | floor plates (all) | 23,695 |
| | miscellaneous items | 46,955 |
| 5 | START DRYDOCK | |
| | lift day (1) | 6,998 |
| | lay days (28) | 160,613 |
| | POP labor | 4,600 |
| | tugs/pilot for shifts | 21,924 |
| 6 | CUT SHELL ACCESS | |
| | exterior staging | 24,200 |
| | interior staging | 10,501 |
| | lay out and mark cut | 3,772 |
| | cut access, remove ashore | 21,345 |
| | prepare edges | 3,892 |

NORTHWEST MARINE

PRICE SUMMARY

14-Feb-91

VESSEL:

CUNARD COUNTESS

OWNER:

CUNARD

| ITEM | TITLE | PRICE |
|------|--|---------|
| 7 | SET UP RIGGING, I-BEAMS, SUPPORT STEEL | |
| | install I-beam supports | 56,380 |
| | install other support steel | 36,129 |
| | lifting eye pads | 17,829 |
| | set up rigging equipment in E.R. | 26,189 |
| | removal of above items | 47,151 |
| | remove structural pillars(2) and other steel | 15,088 |
| 8 | ENGINE REMOVAL | |
| | disconnect holding down bolts | 28,290 |
| | disconnect clutches | 37,720 |
| | disconnect reduction gears | 37,720 |
| | remove side covers | 16,974 |
| | gas free engines | 21,996 |
| | set up rigging on engines | 18,860 |
| | lift engines and turn on side | 94,301 |
| | rig out of engine room | 127,591 |
| | haul trucks | 11,650 |
| 9 | RIG IN NEW ENGINES | |
| | mods to foundations | 55,695 |
| | lift engine and position at access | 37,720 |
| | turn over on side | 28,290 |
| | rig engines into E.R. | 122,591 |
| | turn and lower onto foundations | 75,441 |
| 10 | RIG IN REMOVED INTERFERENCES | |
| | handle into E.R. | 20,746 |
| | position onto foundations | 28,290 |
| 11 | WELD UP SHELL ACCESS | |
| | handle and fit up | 24,818 |
| | temporary supports | 10,972 |
| | tack weld into position | 9,670 |
| | weld up complete | 66,766 |
| | hose test | 2,829 |
| | reinstall structural pillars(2) | 25,628 |
| 12 | UNDOCK VESSEL | |
| | POP labor | 3,500 |
| | shift to berth | 25,519 |
| | berthage charges (21) days | 16,916 |
| | electricity | 20,000 |

NORTHWEST MARINE

PRICE SUMMARY

VESSEL:

CUNARD COUNTESS

14-Feb-91

OWNER:

CUNARD

| ITEM | TITLE | PRICE |
|------|--|---------|
| 13 | SET AND ALIGN ENGINES | |
| | jack and position engines | 35,491 |
| | new holding down bolting | 80,547 |
| | collision chocks | 125,144 |
| 14 | CONNECT UP ASSOCIATED SYSTEMS | |
| | pipng | 157,264 |
| | electrical | 133,532 |
| | alarms | 99,407 |
| | controls | 99,407 |
| | other items | 96,854 |
| 15 | REINSTALL INTERFERENCES | |
| | reversal of item 4 + 50% | 247,874 |
| | furnish and install new insulation | 31,453 |
| | reinstall sheathing | 19,459 |
| 16 | CHOCK ENGINES | |
| | set up dams | 30,775 |
| | final alignment check/adjustment | 18,860 |
| | pour chock fast | 45,046 |
| | collision shims | 39,940 |
| 17 | ADJUSY CLUTCH ADAPTER | |
| | position adapter | 22,812 |
| | mods to existing foundations at clutch | 59,576 |
| | align clutch | 15,567 |
| | chock fast | 9,764 |
| | new holding down bolts | 16,109 |
| 18 | TESTING MODE | |
| | preliminary system tests | 47,750 |
| | dock trial | 15,687 |
| | sea trial, preliminary | 39,940 |
| | additional adjustments | 15,687 |
| | final sea trial | 39,940 |
| | tugs and pilots | 19,527 |
| | trial expenses | 23,966 |

NORTHWEST MARINE

PRICE SUMMARY

14-Feb-91

VESSEL:

CUNARD COUNTESS

OWNER:

CUNARD

| ITEM | TITLE | PRICE |
|------|-----------------------|-----------|
| 19 | GENERAL MODIFICATIONS | |
| | piping | 218,560 |
| | electrical | 194,984 |
| | alarms | 53,142 |
| | controls | 53,142 |
| | structural | 50,146 |
| | painting | 31,286 |
| | lagging | 34,282 |
| | other misc items | 59,134 |
| | shipchecks | 71,204 |
| | TOTAL | 4,238,302 |

EXCLUSIONS

1. Any work involving removal, modification and reinstallation of reduction gears
2. Any work involving modifications to clutches.
3. Renewal of engine foundations, and any modifications in way of vessel's structure

BASIC CONCEPT

1. Install temporary support structures
2. Cut shell access on starboard side only
3. Clear starboard side of all equipment, piping, etc. but leaving cableway (under machine shop deck) intact as is.
Remove pillars in way, but leaving second deck and machine shop intact as is.
4. lift engines up to clear sumps, rig and turn over sideways
5. Slide engines between D.B. tanktop, using a combination of specialty rigging and shore cranes
6. Reverse above for new engines.



January 3, 1991

Mr. Ron Conolly,
Senior Vice President
Cunard Lines
555 Fifth Avenue
New York, NY 10017

Dear Ron:

Enclosed is our schedule and bid summary for the main engine replacement on the Cunard Countess. Our budget estimate based on the attached is \$5,750,000. We have not included any new components in our price.

We have, however, included our labor and material costs in the budget estimate for the following items:

Minor piping and electrical modifications.
System testing.
Dock trials.
Two sea trials.

Please note the three exclusions in our bid summary. We have included costs only for minor adjustments to the engine foundations.

We continue to believe a 49 day (7 week) schedule is achievable in our facility. We would of course like to work with you in developing a complementary work package to effectively utilize the out of service time for other services the ship might require.

I look forward to talking with you about this in the near future.

Yours very truly,

William H. Zavin, II
Senior Vice President
Commercial Contracting Activities

WHZ/rep

Enclosure

cc: Herb Engel
George Riddle

JANUARY 02, 1991
NORTHWEST MARINE
BID SUMMARY

VESSEL: CUNARD COUNTESS
OWNER: CUNARD

| ITEM | TITLE |
|------|--|
| 1 | INSULATION REMOVAL erect stagings to reach deckhead remove sheathing remove & dispose of AB insulation |
| 2 | CLEANING wash down complete E.R. dispose of washings w/AB residual |
| 3 | ENGINE STRIP DOWN disconnect & remove all external piping electrical components turbo chargers cylinder covers other misc. items |
| 4 | REMOVE INTERFERENCES, STB. SIDE sewage tank sewage pumps air compressors (2) circ.pumps (2) sea valve & strainer piping items electrical items catwalks (all) floor plates (all) misc. items |
| 5 | START DRYDOCK lift day (1) lay days (28) POP labor tugs/pilot for shifts |
| 6 | CUT SHELL ACCESS exterior staging interior staging lay out and mark cut cut access, remove ashore prepare edges |

JANUARY 02, 1991
NORTHWEST MARINE
BID SUMMARY

VESSEL: CUNARD COUNTESS
OWNER: CUNARD

| ITEM | TITLE |
|------|---|
| 7 | SET UP RIGGING, I-BEAMS, SUPPORT STEEL install I-beam supports install other support steel lifting eye pads set up rigging equipment in E.R. removal of above items remove structural pillars(2) and other steel |
| 8 | ENGINE REMOVAL disconnect holding down bolts disconnect clutches disconnect reduction gears remove side covers gas free engines set up rigging on engines lift engines and turn on side rig out of engine room POP cranes haul trucks |
| 9 | RIG IN NEW ENGINES mods to foundations lift engine and position at access turn over on side rig engines into E.R. turn and lower onto foundations |
| 10 | RIG IN REMOVED INTERFERENCES handle into E.R. position onto foundations |
| 11 | WELD UP SHELL ACCESS handle and fit up temporary supports tack weld into position weld up complete hose test reinstall structural pillars(2) |
| 12 | UNDOCK VESSEL POP labor shift to berth berthage charges (21) days electricity |

JANUARY 02, 1991
NORTHWEST MARINE
BID SUMMARY

VESSEL: CUNARD COUNTESS
OWNER: CUNARD

| ITEM | TITLE |
|------|--|
| 13 | SET AND ALIGN ENGINES jack and position engines new holding down bolting collision chocks |
| 14 | CONNECT UP ASSOCIATED SYSTEMS piping electrical alarms controls other items |
| 15 | REINSTAL INTERFERENCES reversal of item 4 + 50% furnish and install new insulation reinstall sheathing |
| 16 | CHOCK ENGINES set up dams final alignment check/adjustment pour chock fast collision shims |
| 17 | ADJUSY CLUTCH ADAPTER position adapter mods to existing foundations at clutch align clutch chock fast new holding down bolts |
| 18 | TESTING MODE preliminary system tests dock trial sea trial, preliminary additional adjustments final sea trial tugs and pilots trial expenses |

JANUARY 02, 1991
 NORTHWEST MARINE
 BID SUMMARY

VESSEL: CUNARD COUNTESS
 OWNER: CUNARD

| ITEM | TITLE |
|------|-----------------------|
| 19 | GENERAL MODIFICATIONS |
| | : piping |
| | : electrical |
| | : alarms |
| | : controls |
| | : structural |
| | : painting |
| | : lagging |
| | : other misc items |
| | : shipchecks |
| END | |

JANUARY 02, 1991
NORTHWEST MARINE
BID SUMMARY

VESSEL:
OWNER:

CUNARD COUNTESS
CUNARD

| ITEM | TITLE |
|------|-------|
|------|-------|

EXCLUSIONS

1. Any work involving removal, modification and reinstallation of reduction gears
2. Any work involving modifications to clutches.
- 3 Renewal of engine foundations, and any modifications in way of vessel's structure

BASIC CONCEPT

- 1 Install temporary support structures
- 2 Cut shell access on starboard side only
- 3 Clear starboard side of all equipment, piping, etc. but leaving cableway (under machine shop deck) intact as is.
Remove pillars in way, but leaving second and machine shop intact as is.
- 4 lift engines up to clear sumps, rig and turn over sideways
- 5 Slide engines between D.B. tanktop, using a combination of specialty rigging and shore cranes
- 6 Reverse above for new engines.

NORTHWEST MARINE

BID SUMMARY

VESSEL: CUNARD COUNTESS

OWNER: CUNARD

| | | | | |
|---------|-----------|-----------|-----------|-----------|
| | >>> 1 <<< | >>> 2 <<< | >>> 3 <<< | |
| RATE ST | 45.00 | 0.00 | 0.00 | 02-Jan-91 |
| RATE OT | 20.00 | 0.00 | 0.00 | |
| MARKUP | 15.00% | 0.00% | 0.00% | |

| ITEM | TITLE | ST HOURS | OT HOURS | MAT'L | SUBS | POP/T | POP/UF | PRICE |
|------|------------------------|----------|----------|-------|-------|--------|--------|---------|
| 1 | INSULATION REMOVAL | | | | | | 0 | |
| | erect stagings to re | 440 | 220 | 2500 | | | 1137 | 28,212 |
| | remove sheathing | 360 | 180 | 200 | | | 841 | 20,871 |
| | remove & dispose of | 900 | 450 | 25000 | 5000 | | 3528 | 87,528 |
| | | | 0 | | | | 0 | |
| 2 | CLEANING | | 0 | | | | 0 | |
| | wash down complete E | 600 | 300 | 2000 | 5000 | | 1724 | 42,774 |
| | dispose of washings | 660 | 330 | 500 | 5000 | 2500 | 1790 | 46,915 |
| | | | 0 | | | | 0 | |
| 3 | ENGINE STRIP DOWN | | 0 | | | | 0 | |
| | disconnect & remove | 1200 | 600 | 500 | | | 2796 | 69,371 |
| | electrical component | 800 | 400 | 200 | | | 1858 | 46,088 |
| | turbo chargers | 580 | 290 | 100 | | | 1345 | 33,360 |
| | cylinder covers | 360 | 180 | 100 | | | 836 | 20,751 |
| | other misc. items | 1200 | 600 | 500 | | | 2796 | 69,371 |
| | | | 0 | | | | 0 | |
| 4 | REMOVE INTERFERENCES | | 0 | | | | 0 | |
| | sewage tank | 280 | 140 | 150 | | | 654 | 16,227 |
| | sewage pumps | 180 | 90 | 50 | | | 418 | 10,376 |
| | air compressors (2) | 200 | 100 | 50 | | | 464 | 11,522 |
| | circ.pumps (2) | 180 | 90 | 50 | | | 418 | 10,376 |
| | sea valve & strainer | 140 | 70 | 50 | | | 326 | 8,084 |
| | piping items | 340 | 170 | 100 | | | 790 | 19,605 |
| | electrical items | 240 | 120 | 100 | | | 559 | 13,874 |
| | catwalks (all) | 360 | 180 | 100 | | | 836 | 20,751 |
| | floor plates (all) | 500 | 250 | 100 | | | 1160 | 28,775 |
| | misc. items | 1540 | 770 | 100 | | | 3562 | 88,377 |
| | | | 0 | | | | 0 | |
| 5 | START DRYDOCK | | 0 | | | | 0 | |
| | lift day (1) | | 0 | | | 6998 | 0 | 6,998 |
| | lay days (28) | | 0 | | | 160613 | 0 | 160,613 |
| | POP labor | | 0 | | | 3500 | 0 | 3,500 |
| | tugs/pilot for shift | 160 | 80 | | 15000 | | 1094 | 27,144 |
| | | | 0 | | | | 0 | |
| 6 | CUT SHELL ACCESS | | 0 | | | | 0 | |
| | exterior staging | 420 | 210 | 2000 | | | 1067 | 26,467 |
| | interior staging | 210 | 105 | 500 | | | 509 | 12,634 |
| | lay out and mark cut | 80 | 40 | | | | 185 | 4,585 |
| | cut access, remove al | 440 | 220 | 500 | | | 1041 | 25,816 |
| | prepare edges | 80 | 40 | 100 | | | 190 | 4,705 |
| | | | 0 | | | | 0 | |
| 7 | SET UP RIGGING, I-BEA | | 0 | | | | 0 | |
| | install I-beam support | 1060 | 530 | 10000 | | | 2932 | 72,732 |
| | install other support | 590 | 295 | 3000 | | | 1508 | 37,408 |
| | lifting eye pads | 240 | 120 | 1500 | | | 627 | 15,552 |
| | set up rigging equip | 530 | 265 | 1000 | | | 1273 | 31,573 |
| | removal of above ite | 1740 | 870 | | | | 4019 | 99,719 |

1 X 17496 GT X .40
27 X 17496 GT X .34

NORTHWEST MARINE

BID SUMMARY

VESSEL: CUNARD COUNTESS

OWNER: CUNARD

| | | | | |
|---------|-----------|-----------|-----------|-----------|
| | >>> 1 <<< | >>> 2 <<< | >>> 3 <<< | |
| RATE ST | 45.00 | 0.00 | 0.00 | 02-Jan-91 |
| RATE OT | 20.00 | 0.00 | 0.00 | |
| MARKUP | 15.00% | 0.00% | 0.00% | |

| ITEM | TITLE | ST HOURS | OT HOURS | MAT'L | SUBS | POP/T | POP/UF | PRICE |
|------|----------------------|----------|----------|-------|-------|-------|--------|---------|
| | remove structural pi | 320 | 160 | | | | 739 | 18,339 |
| | | | 0 | | | | 0 | |
| 8 | ENGINE REMOVAL | | 0 | | | | 0 | |
| | disconnect holding d | 600 | 300 | | | | 1386 | 34,386 |
| | disconnect clutches | 800 | 400 | | | | 1848 | 45,848 |
| | disconnect reduction | 1000 | 500 | | | | 2310 | 57,310 |
| | remove side accesses | 360 | 180 | | | | 832 | 20,632 |
| | gas free engines | 400 | 200 | 1200 | 1000 | 500 | 1030 | 26,060 |
| | set up rigging on en | 400 | 200 | | | | 924 | 22,924 |
| | lift engines and tur | 2000 | 1000 | | | | 4620 | 114,620 |
| | rig out of engine ro | 2400 | 1200 | | | | 5544 | 137,544 |
| | POP cranes | 200 | 100 | | | 5000 | 462 | 16,462 |
| | haul trucks | 120 | 60 | | 5000 | | 519 | 12,869 |
| | | | 0 | | | | 0 | |
| 9 | RIG IN NEW ENGINES | | 0 | | | | 0 | |
| | mods to foundations | 3400 | 1700 | 15000 | | | 8579 | 212,829 |
| | lift engine and posi | 600 | 300 | | | | 1386 | 34,386 |
| | turn over on side | 600 | 300 | | | | 1386 | 34,386 |
| | rig engines into E.R | 2400 | 1200 | | | | 5544 | 137,544 |
| | turn and lower onto | 1200 | 600 | | | | 2772 | 68,772 |
| | | | 0 | | | | 0 | |
| 10 | RIG IN REMOVED INTER | | 0 | | | | 0 | |
| | handle into E.R. | 440 | 220 | | | | 1016 | 25,216 |
| | position onto founda | 600 | 300 | | | | 1386 | 34,386 |
| | | | 0 | | | | 0 | |
| 11 | WELD UP SHELL ACCESS | | 0 | | | | 0 | |
| | handle and fit up | 520 | 260 | 250 | | | 1213 | 30,101 |
| | temporary supports | 220 | 110 | 500 | | | 532 | 13,207 |
| | tack weld into posit | 200 | 100 | 200 | | | 472 | 11,702 |
| | weld up complete | 1200 | 600 | 3500 | 5000 | | 3183 | 78,958 |
| | hose test | 60 | 30 | | | | 139 | 3,439 |
| | reinstall structural | 480 | 240 | 2500 | | | 1230 | 30,505 |
| | | | 0 | | | | 0 | |
| 12 | UNDock VESSEL | | 0 | | | | 0 | |
| | POP labor | | 0 | | | 3500 | 0 | 3,500 |
| | shift to berth | 160 | 80 | | 15000 | | 1094 | 27,144 |
| | berthage charges (21 | | 0 | | | 16916 | 0 | 16,916 |
| | electricity | | 0 | | | 20000 | 0 | 20,000 |
| | | | 0 | | | | 0 | |
| 13 | SET AND ALIGN ENGINE | | 0 | | | | 0 | |
| | jack and position en | 740 | 370 | 500 | | | 1734 | 43,009 |
| | new holding down bol | 1200 | 600 | 20000 | | | 3738 | 92,738 |
| | collision chocks | 2800 | 1400 | 10000 | | | 6951 | 172,451 |
| | | | 0 | | | | 0 | |
| 14 | CONNECT UP ASSOCIATE | | 0 | | | | 0 | |
| | pipng | 2400 | 1200 | 25000 | | | 6752 | 167,502 |
| | electrical | 2400 | 1200 | 15000 | | | 6269 | 155,519 |
| | alarms | 1600 | 800 | 20000 | | | 4662 | 115,662 |

21 DAYS X 537' X 1.50

NORTHWEST MARINE

BID SUMMARY

VESSEL: CUNARD COUNTESS

OWNER: CUNARD

| | | | | |
|---------|-----------|-----------|-----------|-----------|
| | >>> 1 <<< | >>> 2 <<< | >>> 3 <<< | |
| RATE ST | 45.00 | 0.00 | 0.00 | 02-Jan-91 |
| RATE OT | 20.00 | 0.00 | 0.00 | |
| MARKUP | 15.00% | 0.00% | 0.00% | |

| ITEM | TITLE | ST HOURS | OT HOURS | MAT'L | SUBS | POP/T | POP/UF | PRICE |
|------|-----------------------|----------|----------|--------|-------|--------|--------|-----------|
| | controls | 1600 | 800 | 20000 | | | 4662 | 115,662 |
| | other items | 1800 | 900 | 10000 | | | 4641 | 115,141 |
| | | | 0 | | | | 0 | |
| 15 | REINSTALL INTERFERENC | | 0 | | | | 0 | |
| | reversal of item 4 + | 6120 | 3060 | 5000 | | | 14379 | 356,729 |
| | furnish and install | 540 | 270 | 5000 | | | 1489 | 36,939 |
| | reinstall sheathing | 400 | 200 | 500 | | | 948 | 23,523 |
| | | | 0 | | | | 0 | |
| 16 | CHOCK ENGINES | | 0 | | | | 0 | |
| | set up dams | 640 | 320 | 500 | | | 1503 | 37,278 |
| | final alignment chec | 400 | 200 | | | | 924 | 22,924 |
| | pour chock fast | 320 | 160 | 25000 | | | 1947 | 48,297 |
| | collision shims | 720 | 360 | 5000 | | | 1905 | 47,255 |
| | | | 0 | | | | 0 | |
| 17 | ADJUSY CLUTCH ADAPTE | | 0 | | | | 0 | |
| | position adapter | 480 | 240 | 150 | | | 1116 | 27,689 |
| | mods to existing fou | 1680 | 840 | 2500 | | | 4002 | 99,277 |
| | align clutch | 320 | 160 | 400 | | | 759 | 18,819 |
| | chock fast | 80 | 40 | 5000 | | | 426 | 10,576 |
| | new holding down bol | 240 | 120 | 4000 | | | 748 | 18,548 |
| | | | 0 | | | | 0 | |
| 18 | TESTING MODE | | 0 | | | | 0 | |
| | preliminary system t | 1200 | 600 | 500 | | | 2796 | 69,371 |
| | dock trial | 320 | 160 | 500 | | | 763 | 18,938 |
| | sea trial, preliminar | 720 | 360 | 2500 | 2500 | | 1905 | 47,255 |
| | additional adjustmen | 320 | 160 | 500 | | | 763 | 18,938 |
| | final sea trial | 720 | 360 | 2500 | 2500 | | 1905 | 47,255 |
| | tugs and pilots | 160 | 80 | | 10000 | | 853 | 21,153 |
| | trial expenses | 0 | 0 | | 20000 | | 966 | 23,966 |
| | | | 0 | | | | 0 | |
| 19 | GENERAL MODIFICATION | | 0 | | | | 0 | |
| | pipng | 5000 | 2500 | 25000 | | | 12758 | 316,508 |
| | electrical | 4500 | 2250 | 25000 | | | 11603 | 287,853 |
| | alarms | 1500 | 750 | 5000 | | | 3707 | 91,957 |
| | controls | 1500 | 750 | 5000 | | | 3707 | 91,957 |
| | structural | 1400 | 700 | 2500 | | | 3355 | 83,230 |
| | painting | 600 | 300 | 2500 | | | 1507 | 37,382 |
| | lagging | 600 | 300 | 5000 | | | 1628 | 40,378 |
| | other misc items | 3400 | 1700 | 10000 | | | 8337 | 206,837 |
| | shipchecks | 1400 | 700 | 25000 | | | 4442 | 110,192 |
| | | | 0 | | | | 0 | |
| | | | 0 | | | | 0 | |
| | TOTAL | 87110 | 43555 | 359250 | 91000 | 219527 | 222979 | 5,751,347 |

02-Jan-91 FILE XXXXXXXX

NORTHWEST MARINE

BID SUMMARY OF REVENUE AND EXPENSES

VESSEL: CUNARD COUNTESS

OWNER: CUNARD

DAYS: REG. 35

DAYS: CAL. 49

RE-ENGINEING

BASIC BID

| | EST. | RATE | \$ |
|-----------------|-----------|--------|-----------|
| REVENUES: | | | |
| MANHOURS: S.T. | 87,110 | 45.000 | 3,919,950 |
| O.T. | 43,555 | 20.000 | 871,100 |
| MATERIALS: | 359,250 | 1.150 | 413,138 |
| SUBCONTRACTORS: | 91,000 | 1.150 | 104,650 |
| BONDS: | 0 | 0.000 | 0 |
| OTHER: | 0 | 0.000 | 0 |
| P.O.P. TARIFF: | 219,527 | 1.000 | 219,527 |
| P.O.P. USE FEE: | 5,308,838 | 0.042 | 222,971 |

TOTAL REVENUES: CALC 5,751,336

TOTAL REVENUES: BID 5,751,347

DIRECT EXPENSES:

| | | | |
|-----------------|--------|--------|-----------|
| LABOR: REGULAR | 87,110 | 13.900 | 1,210,829 |
| LABOR: PREMIUM | 43,555 | 6.950 | 302,707 |
| MATERIALS: | | | 359,250 |
| SUBCONTRACTORS: | | | 91,000 |
| BONDS: | | | 0 |
| OTHER: | | | 0 |
| P.O.P. TARIFF: | | | 219,527 |
| P.O.P. USE FEE: | | | 222,971 |

TOTAL EXPENSES: 2,406,284

GROSS CONTRIBUTION: 3,345,063

VARIABLE OVERHEAD: 87,110 10.600 923,366

NET CONTRIBUTION: 2,421,697

RECOVERY BID RATE: 52.30

PORT OF PORTLAND, PER HR. 5.08

REMARKS:

MEN PER DAY..8 HR.SHIFTS 311

MEN PER DAY.10 HR SHIFTS 249

DRYDOCK: NO ___ YES X DAYS 28

NORTH WEST MARINE
 PORTLAND, OREGON
 DECEMBER 25, 1990

CUNARD COUNTESS
 RENEWAL OF MAIN ENGINES

| FUNCTION | WEEKS | | | | | | |
|---|-------|-------|-------|-------|-------|-------|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| INSULATION REMOVAL | - | : | : | : | : | : | : |
| CLEANING | - | : | : | : | : | : | : |
| ENGINE STRIP DOWN | ----- | : | : | : | : | : | : |
| REMOVE INTERFERENCES, STB. SIDE | ----- | : | : | : | : | : | : |
| START DRYDOCK PERIOD | * | : | : | : | : | : | : |
| CUT SHELL ACCESS, STB. SIDE | ----- | : | : | : | : | : | : |
| SET UP RIGGING, I-BEAMS, & SUPPORT STEEL | ----- | : | : | : | : | : | : |
| ENGINE REMOVAL | : | ----- | : | : | : | : | : |
| RIG IN NEW ENGINES | : | : | ----- | : | : | : | : |
| RIG IN REMOVED INTERFERENCES | : | : | : | ----- | : | : | : |
| WELD UP SHELL ACCESS | : | : | : | : | ----- | : | : |
| UNDOCK VESSEL | : | : | : | : | * | : | : |
| SET AND ALIGN ENGINES | : | : | : | : | ----- | : | : |
| CONNECT UP ASSOCIATED SYSTEMS | : | : | : | : | ----- | : | : |
| REINSTALL INTERFERENCES | : | : | : | : | ----- | : | : |
| CHOCK ENGINES | : | : | : | : | : | ----- | : |
| ADJUST CLUTCH ADAPTER | : | : | : | : | : | ----- | : |
| TESTING MODE | : | : | : | : | : | ----- | : |
| GENERAL MODIFICATIONS OF PIPING AND ELECTRICAL SYSTEMS AND FOUNDATIONS | : | : | ----- | : | : | : | : |

B.11

for you info. — preliminary schedule
 that John and I came up with. Might
 need some adjustments before we
 submit.

NORTH WEST MARINE
 PORTLAND, OREGON
 DECEMBER 25, 1990

RENEWAL OF MAIN ENGINES

Geo. 12/26

| FUNCTION | WEEKS | | | | | | |
|---|-------|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| INSULATION REMOVAL | ■ | : | : | : | : | : | : |
| CLEANING | ■ | : | : | : | : | : | : |
| ENGINE STRIP DOWN | ■ | ■ | : | : | : | : | : |
| REMOVE INTERFERENCES, STB. SIDE | ■ | ■ | : | : | : | : | : |
| START DRYDOCK PERIOD | : | ■ | : | : | : | : | : |
| CUT SHELL ACCESS, STB. SIDE | ■ | ■ | : | : | : | : | : |
| SET UP RIGGING, I-BEAMS, & SUPPORT STEEL | : | ■ | ■ | : | : | : | : |
| ENGINE REMOVAL | : | ■ | ■ | ■ | : | : | : |
| RIG IN NEW ENGINES | : | : | ■ | ■ | ■ | : | : |
| RIG IN REMOVED INTERFERENCES | : | : | : | ■ | ■ | : | : |
| WELD UP SHELL ACCESS | : | : | : | : | ■ | ■ | : |
| UNDOCK VESSEL | : | : | : | : | ■ | ■ | : |
| SET AND ALIGN ENGINES | : | : | : | : | ■ | ■ | : |
| CONNECT UP ASSOCIATED SYSTEMS | : | : | : | ■ | ■ | ■ | ■ |
| REINSTALL INTERFERENCES | : | : | : | : | ■ | ■ | ■ |
| CHOCK ENGINES | : | : | : | : | : | ■ | ■ |
| ADJUST CLUTCH ADAPTER | : | : | : | : | : | ■ | ■ |
| TESTING MODE | : | : | : | : | : | ■ | ■ |
| GENERAL MODIFICATIONS OF PIPING AND ELECTRICAL SYSTEMS AND FOUNDATIONS | : | : | ■ | ■ | ■ | ■ | ■ |

CUNARD
SHIPS • HOTELS • RESORTS

FACSIMILE LEAD SHEET

**FROM: CUNARD LINE OPERATIONS
NEW YORK**

Telephone Number: (212) 880-7500
Telefax Number: (212) 949-0915
Telex Number - RCA 220436 - CUNL UR
239713 - CUNL UR
WUI 12246-CUNARDRSVN NYK

TO: Southwest Marine FAX NO. _____
Attn. Mr. B. Zavin. 503 240 6600

FROM: O. Silnes - Cunard Line.

SUBJECT: Cunard Countess - Re engineering.

COMMENTS: Cunard Countess schedule as
agreed upon. When time and port
is decided, agents info will be sent
you if necessary.

DATE: _____ NO. PAGES W/THIS PAGE 2.

TIME: _____

PLEASE PASS ON TO ADDRESSEE ASAP.

IF ALL PAGES NOT RECEIVED, PLEASE ADVISE SENDER. THANK YOU.

CUNARD COUNTES

| VOYAGE | DATE | PORT | ARRIVE | DEPART |
|--------|--------|------------|--------|--------|
| 398 | DEC 1 | SAN JUAN | ---- | 2000 |
| | 2 | AT SEA | | |
| | 3 | BARBADOS | 1000 | 1900 |
| | 4 | GRENADA | 0800 | 1800 |
| | 5 | MARTINIQUE | 0700 | 1600 |
| | 6 | ST KITTS | 0730 | 1800 |
| | 7 | ST THOMAS | 0700 | 2300 |
| | 8 | SAN JUAN | 0600 | ---- |
| 399 | DEC 8 | SAN JUAN | ---- | 2000 |
| | 9 | ST MAARTEN | 1230 | 1730 |
| | 10 | DOMINICA | 1100 | 1900 |
| | 11 | ST LUCIA | 0730 | 1800 |
| | 12 | GUADELOUPE | 0800 | 1800 |
| | 13 | ST KITTS | 0700 | 1700 |
| | 14 | ST THOMAS | 0700 | 2130 |
| | 15 | SAN JUAN | 0600 | ---- |
| 400 | DEC 15 | SAN JUAN | ---- | 2000 |
| | 16 | TORTOLA | 1200 | 1600 |
| | 17 | ANTIGUA | 0830 | 1600 |
| | 18 | MARTINIQUE | 0900 | 1800 |
| | 19 | BARBADOS | 0700 | 1700 |
| | 20 | AT SEA | | |
| | 21 | ST THOMAS | 0700 | 2130 |
| | 22 | SAN JUAN | 0600 | ---- |
| 401 | DEC 22 | SAN JUAN | ---- | 2000 |
| | 23 | TORTOLA | 1200 | 2230 |
| | 24 | ST MAARTEN | 0630 | 1700 |
| | 25 | GUADELOUPE | 0800 | 1800 |
| | 26 | ST LUCIA | 0800 | 1600 |
| | 27 | ANTIGUA | 0830 | 1600 |
| | 28 | ST THOMAS | 0700 | 2300 |
| | 29 | SAN JUAN | 0600 | ---- |

2. These amendments are being incorporated into the next change [No.16/90] to the O.S.S.

3. CUNARD ships and offices have been informed.



[G A S Paul]

AVP Marine Operations

FACSIMILE

NOVEMBER 27, 1990

TO: SOUTHWEST MARINE
ATTN: MR. B. ZAVIN
FAX NO. 503-240-6600

FROM: *Plow* O. SILNES/CUNARD NY

RE: CUNARD COUNTESS RE-ENGINEING

WITH REFERENCE TO OUR TELEPHONE CONVERSATION TODAY, PLEASE
BE INFORMED THAT THE ACTUAL TYPES OF ENGINES FOR RE-ENGINEING
AS SEEN TODAY ARE AS FOLLOWS:

| | | |
|---------|---------------------|---------------|
| ALT. 1: | 4 OFF WARTSILA VASA | TYPE 9R32D |
| ALT. 2: | 4 OFF CATERPILLAR | TYPE 3612 VEE |
| ALT. 3: | 4 OFF MAN/B+W | TYPE 6140/54 |
| ALT. 4: | 4 OFF WARTSILA VASA | TYPE 4R46 |

PLEASE FIND ON THE FOLLOWING PAGES, WEIGHTS AND MEASUREMENTS
FOR ABOVE MENTIONED ENGINES AND STEEL CONSTRUCTION DRAWINGS
OF THE AREA IN QUESTION.

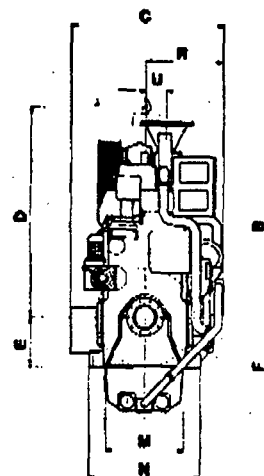
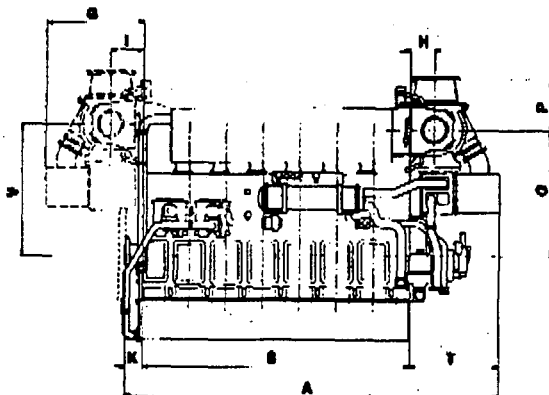
I ALSO INCLUDE AS A GUIDELINE, MALTA DRYDOCKS PROPOSAL FOR
RE-ENGINEING SINCE THEY KNOW THE VESSEL FROM EARLIER REFITS.

HOWEVER, IT SHOULD BE SUFFICIENT TO OPEN UP THE SHIPSIDE
ONLY ON STARBOARD SIDE AND CONSEQUENTLY LESS REMOVAL OF AUX.
MACHINERY. EXISTING INSTALLATION IS 4 OFF MAN/B+W TYPE
7S50HU.

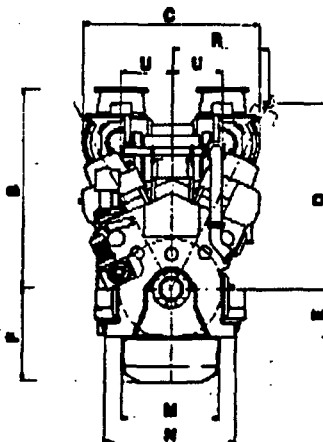
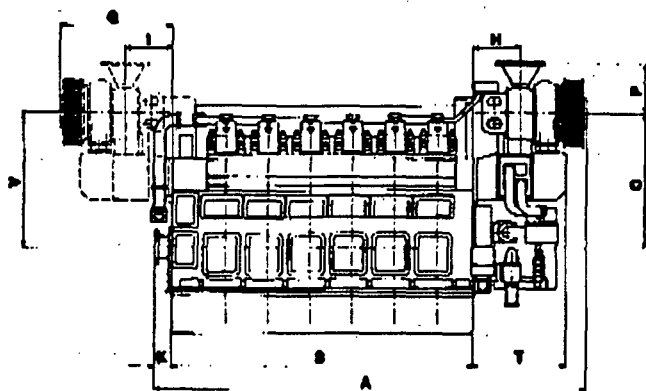
REGARDS

CC: R. CONOLLY

13 PAGES FOLLOWING

WÄRTSILÄ DIESEL**WÄRTSILÄ VASA 32
PROJECT GUIDE FOR
MARINE APPLICATIONS****4
Issue 1990****1.5. PRINCIPAL DIMENSIONS AND WEIGHTS****In-line engines (1V58B767 a)**

| Engine | A | B | C | D | E | F | G | H | I | K |
|--------|------|------|------|------|-----|------|------|-----|------|---------------|
| 4R32 | 3825 | 2259 | 1905 | 2550 | 600 | 1135 | 1250 | 285 | 357 | 225 |
| 6R32 | 4955 | 2345 | 1960 | 2550 | 600 | 1135 | 1340 | 325 | 432 | 225 |
| 8R32 | 5985 | 2617 | 1945 | 2550 | 600 | 1135 | 1060 | 444 | 464 | 225 |
| 9R32 | 6485 | 2649 | 2115 | 2550 | 600 | 1135 | 1070 | 490 | 530 | 225 |
| Engine | M | N | O | P | R | S | T | U | V | Weight ton |
| 4R32 | 950 | 1350 | 1645 | 614 | 950 | 2570 | 1030 | 295 | 1645 | 18.5 |
| 6R32 | 950 | 1350 | 1673 | 672 | 950 | 3550 | 1210 | 257 | 1740 | 26.0 |
| 8R32 | 950 | 1350 | 1876 | 741 | 950 | 4530 | 1235 | 218 | 1898 | 35.5 |
| 9R32 | 950 | 1350 | 1835 | 814 | 950 | 5020 | 1250 | 212 | 1905 | 40.0 |

V-engines (1V58B768)

| Engine | A | B | C | D | E | F | G | H | I | K |
|--------|------|------|------|------|-----|------|------|-----|-----|-----|
| 12V32 | 5686 | 2503 | 2590 | 2330 | 600 | 1150 | 1491 | 621 | 621 | 225 |
| 16V32 | 6806 | 2673 | 2340 | 2330 | 600 | 1150 | 1491 | 621 | 621 | 225 |
| 18V32 | 7440 | 2795 | 2470 | 2330 | 600 | 1150 | 1565 | 555 | 555 | 225 |



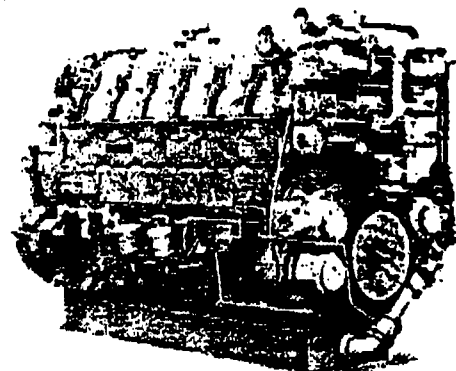
CATERPILLAR

MARINE PROPULSION ENGINE

36001700-6860 hp
1270-4965 kW

SPECIFICATIONS

| | | |
|--|--------------------------|-----------|
| Bore — mm (in) | 280 | (11.0) |
| Stroke — mm (in) | 300 | (11.8) |
| Displacement/Cylinder — L (in ³) | 18.5 | (1127) |
| Compression Ratio | 13:1 | |
| Aspiration | Turbocharged-Aftercooled | |
| Rotation | ccw or cw | |
| Low Idle Speed — rpm | 300-400 | |
| Rated Speed — rpm | 700-1000 | |
| Average Piston Speed — m/s (ft/s) | 7.0-10.0 | (23-32.8) |
| bmep — bar (psi) | | |
| (Continuous Service) | 18.2-19.8 | (263-285) |
| (Maximum Continuous) | 20.0-21.7 | (290-314) |
| bsfc (with pumps) — g/kW-h (lb/hp-h) | | |
| (Continuous Service) | 190-194 | (313-319) |
| (Maximum Continuous) | 189-195 | (311-322) |



3606 Shown

PERFORMANCE DATA*

3606 In-Line

| Rated rpm | 1000 | | | 900 | | | 800 | | | 700 | | |
|--|------|------|------|------|------|------|------|------|------|------|------|------|
| | kW | mhp | bhp | kW | mhp | bhp | kW | mhp | bhp | kW | mhp | bhp |
| Continuous Service or ISO Standard Rating | 1680 | 2285 | 2250 | 1570 | 2135 | 2100 | 1420 | 1930 | 1900 | 1270 | 1725 | 1700 |
| Maximum Continuous or ISO Fuel Stop Rating | 1845 | 2510 | 2475 | 1725 | 2345 | 2310 | 1560 | 2120 | 2090 | 1400 | 1905 | 1880 |

3608 In-Line

| Rated rpm | 1000 | | | 900 | | | 800 | | | 700 | | |
|--|------|------|------|------|------|------|------|------|------|------|------|------|
| | kW | mhp | bhp | kW | mhp | bhp | kW | mhp | bhp | kW | mhp | bhp |
| Continuous Service or ISO Standard Rating | 2240 | 3045 | 3000 | 2090 | 2840 | 2800 | 1890 | 2570 | 2530 | 1680 | 2285 | 2250 |
| Maximum Continuous or ISO Fuel Stop Rating | 2485 | 3380 | 3330 | 2300 | 3130 | 3080 | 2080 | 2830 | 2790 | 1850 | 2515 | 2480 |

3612 VEE

| Rated rpm | 1000 | | | 900 | | | 800 | | | 700 | | |
|--|------|------|------|------|------|------|------|------|------|------|------|------|
| | kW | mhp | bhp | kW | mhp | bhp | kW | mhp | bhp | kW | mhp | bhp |
| Continuous Service or ISO Standard Rating | 3355 | 4560 | 4500 | 3135 | 4280 | 4200 | 2840 | 3880 | 3800 | 2535 | 3450 | 3400 |
| Maximum Continuous or ISO Fuel Stop Rating | 3690 | 5020 | 4950 | 3450 | 4690 | 4625 | 3125 | 4250 | 4190 | 2800 | 3805 | 3760 |

3616 VEE

| Rated rpm | 1000 | | | 900 | | | 800 | | | 700 | | |
|--|------|------|------|------|------|------|------|------|------|------|------|------|
| | kW | mhp | bhp | kW | mhp | bhp | kW | mhp | bhp | kW | mhp | bhp |
| Continuous Service or ISO Standard Rating | 4475 | 6085 | 6000 | 4180 | 5685 | 5600 | 3785 | 5150 | 5075 | 3360 | 4570 | 4500 |
| Maximum Continuous or ISO Fuel Stop Rating | 4965 | 6750 | 6660 | 4600 | 6255 | 6170 | 4165 | 5685 | 5580 | 3700 | 5030 | 4960 |

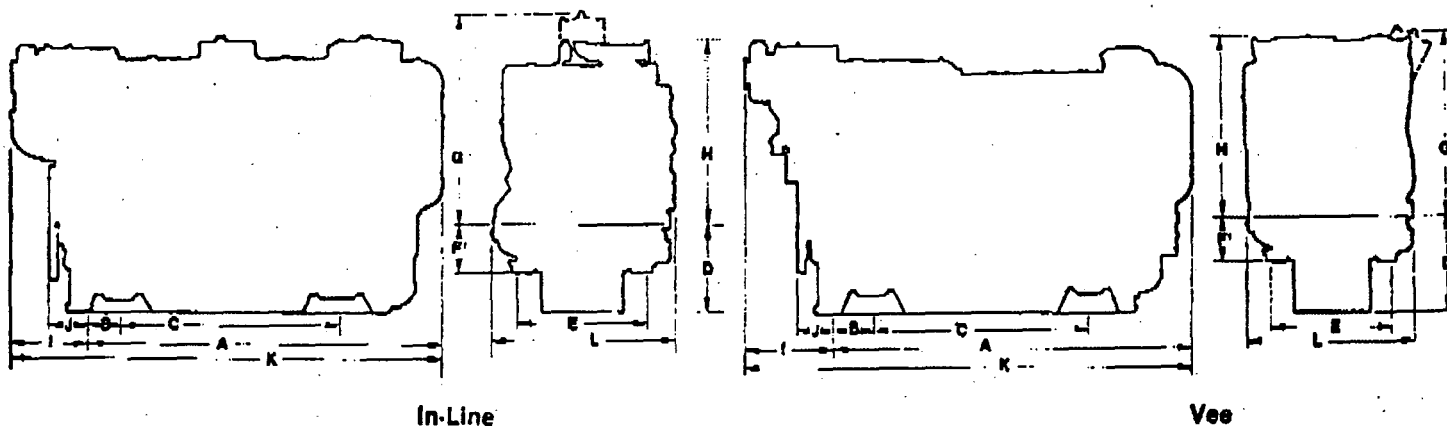
RATING CONDITIONS

Ratings are based on SAE J1349 standard conditions of 100 kPa (29.61 in Hg) and 25°C (77°F). These ratings also apply at ISO 3048/1, DIN 6271 and BS 5514 standard conditions of 100 kPa (29.61 in Hg), 27°C (81°F) and 60% relative humidity.

Ratings also meet classification society maximum temperature requirements of 45°C (113°F) ambient temperature and 32°C (90°F) sea water temperature.

Fuel consumption is based on ISO 3048/1 with +5% tolerance for fuel having an LHV of 42 780 kJ/kg (18,390 Btu/lb) and weighing 838.9 g/liter (7.001 lbs/U.S. gal).

3600 Marine Propulsion 1700 — 6660 hp



DIMENSIONS

| | A | B | C | D | E | F1 | F2 | F3 | G | H | I | J | K | L | W |
|--------------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|-------|-----------|
| 3606 In-Line | | | | | | | | | | | | | | | |
| mm | 3261 | 265 | 2050 | 841 | 1120 | 405 | 308 | 450 | 2035 | 1785 | 715 | 360 | 3976 | 1748 | kg 15 680 |
| in | 128.39 | 10.43 | 80.71 | 33.11 | 44.09 | 15.94 | 12.13 | 17.72 | 80.12 | 70.28 | 28.15 | 14.17 | 156.54 | 68.82 | lb 34,500 |

3608 In-Line

| | A | B | C | D | E | F1 | F2 | F3 | G | H | I | J | K | L | W |
|--------------|--------|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|-------|-----------|
| 3608 In-Line | | | | | | | | | | | | | | | |
| mm | 4081 | 265 | 2870 | 841 | 1120 | 405 | 308 | 450 | 2035 | 1785 | 715 | 360 | 4796 | 1748 | kg 19 000 |
| in | 160.67 | 10.43 | 112.99 | 33.11 | 44.09 | 15.94 | 12.13 | 17.72 | 80.12 | 70.28 | 28.15 | 14.17 | 188.82 | 68.82 | lb 41,800 |

3612 VEE

| | A | B | C | D | E | F1 | F2 | F3 | G | H | I | J | K | L | W |
|----------|--------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|-------|--------|-------|-----------|
| 3612 VEE | | | | | | | | | | | | | | | |
| mm | 3657 | 300 | 2300 | 976 | 1120 | 405 | 308 | 450 | 1850 | 1900 | 905 | 360 | 4562 | 1714 | kg 25 140 |
| in | 143.98 | 11.81 | 90.55 | 38.43 | 44.09 | 15.94 | 12.13 | 17.72 | 72.83 | 74.8 | 35.63 | 14.17 | 179.61 | 67.48 | lb 55,300 |

3616 VEE

| | A | B | C | D | E | F1 | F2 | F3 | G | H | I | J | K | L | W |
|----------|-------|-------|--------|-------|-------|-------|-------|-------|-------|------|-------|-------|--------|-------|-----------|
| 3616 VEE | | | | | | | | | | | | | | | |
| mm | 4577 | 300 | 3220 | 976 | 1120 | 405 | 308 | 450 | 1850 | 1900 | 905 | 360 | 5482 | 1714 | kg 29 950 |
| in | 180.2 | 11.81 | 126.77 | 38.43 | 44.09 | 15.94 | 12.13 | 17.72 | 72.83 | 74.8 | 35.63 | 14.17 | 215.83 | 67.48 | lb 65,900 |

- C** centerline distance between mounting feet
F1, F2, F3 optional mounting dimensions
G removal distance for piston
J distance from flywheel mounting face to cylinder block rear face
W approximate dry weight of engine with attachments such as filters, oil cooler, flywheel, pumps, etc.

MARINE CERTIFICATION

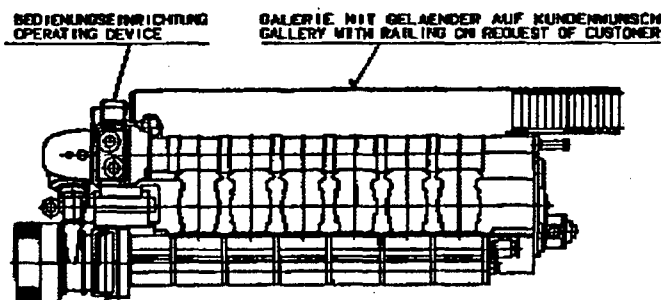
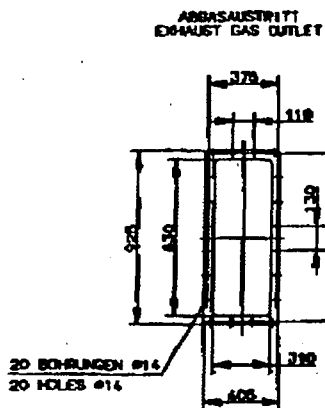
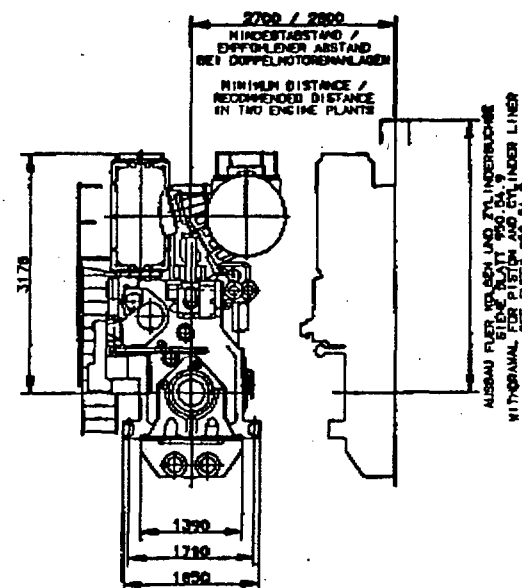
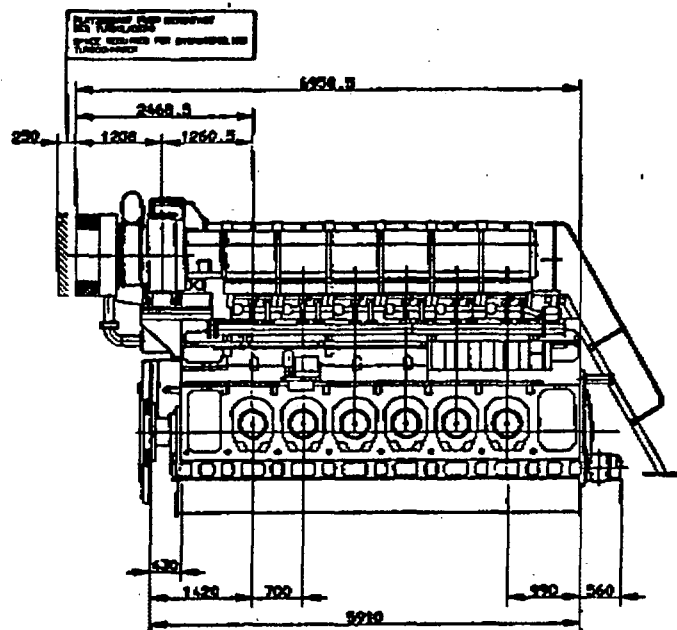
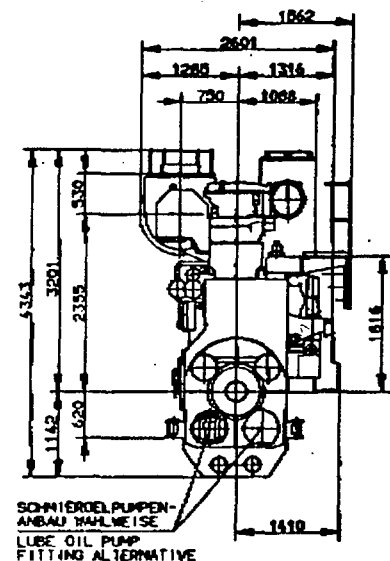
Ratings are marine classification society approved by ABS, BV, DnV, GL, LRS, NKK and RINA. These societies have also granted 3600 factory line production approval which eliminates requirement for society surveyor witness test.

FUEL CAPABILITY

The 3600 Family of Engines is developed for marine propulsion, without power deration, on fuel with viscosity and contaminants up to CIMAC Class k55 (700 cSt at 50°C).

MOTOR KLEBEFOLIEN, MASSSTAB 1:25/1:50/1:100 AUF ANFORDERUNG
ENGINE - STICKER : SCALE 1:25/1:50/1:100 ON REQUEST

MASCHINENRAUMKRAN: FÜR WARTUNGSARBEITEN AM MOTOR
IST DER MASCHINENRAUMKRAN MIT 2000 KG AUSZULEGEN.
ENGINE ROOM CRANE: WITH A VIEW TO MAINTENANCE WORK ON
THE ENGINE THE CRANE MUST BE CAPABLE OF HANDLING 2000 KG.



MOTORLEISTUNG:

MCR = 605 kW/ZYL. BEI 500/514 1/MIN
ECR = 550 kW/ZYL. BEI 500/514 1/MIN

ENGINE RATING:

MCR = 605 kW/CYL. AT 500/514 C.C.P.M.
ECR = 550 kW/CYL. AT 500/514 C.C.P.M.

MASSSTAB
SCALE 1:100

Turbolader auf Kupplungsseite

turbocharger on coupling side



MASCHINENRAUMPLANUNG
ENGINE ROOM PLANNING

MARINE

6L 40/54

950.54.2

102

C

WEIGHT: 75 tons.

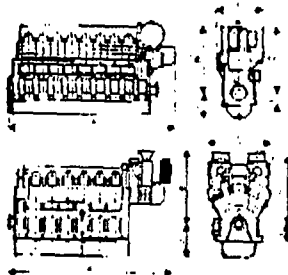
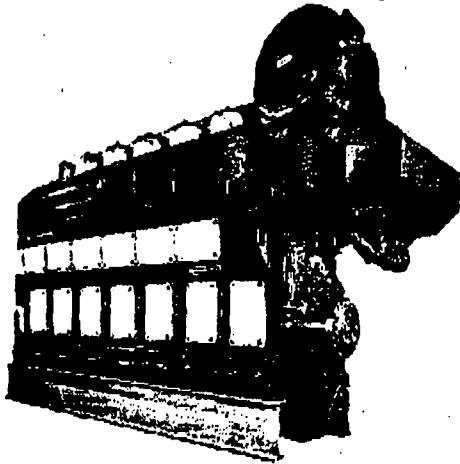
TEL. 1-212-749-0910

NOV 21, 2010 10:00 AM U.S. F.O.D.

NWMAR130742

Main data

WARTSILA 4R46



MAIN DATA:

| | |
|-------------------------|--------------------|
| Cylinder bore | 460 mm |
| Piston stroke | 580 mm |
| Speed | 450, 500, 514 rpm |
| Mean effective pressure | 25, 22.5, 21.9 bar |
| Piston speed | 8.7, 9.7, 9.9 m/s |
| FUEL SPECIFICATION: | |
| Fuel oil | 50°C/700 cSt |
| | 100°F/7000 sSt |
| Gas | |

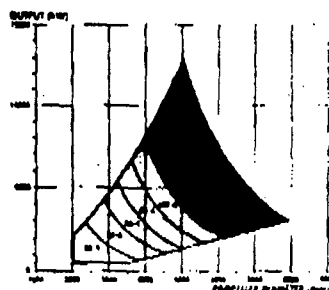
RATED POWER: PROPULSION ENGINES

| Engine type | 450 rpm | | Output in kW (BHP) at | | 514 rpm | |
|-------------|---------|-------|-----------------------|-------|---------|-------|
| | kW | (BHP) | kW | (BHP) | kW | (BHP) |
| 4R46 | 3620 | 4920 | 3620 | 4920 | 3620 | 4920 |
| 6R46 | 5430 | 7380 | 5430 | 7380 | 5430 | 7380 |
| 8R46 | 7240 | 9840 | 7240 | 9840 | 7240 | 9840 |
| 9R46 | 8145 | 11070 | 8145 | 11070 | 8145 | 11070 |
| 12V46 | 10860 | 14760 | 10860 | 14760 | 10860 | 14760 |
| 16V46 | 14480 | 19680 | 14480 | 19680 | 14480 | 19680 |
| 18V46 | 16290 | 22140 | 16290 | 22140 | 16290 | 22140 |

PRINCIPAL ENGINE DIMENSIONS (mm) AND WEIGHTS (tonnes)

| Engine type | A | B | C | D | E | F | Weight / ton |
|-------------|-------|------|------|------|-----|------|--------------|
| 4R46 | 6490 | 4020 | 2990 | 3800 | 650 | 1460 | 75 |
| 6R46 | 8000 | 4120 | 2990 | 3800 | 650 | 1460 | 95 |
| 8R46 | 10010 | 4300 | 3475 | 3800 | 650 | 1460 | 130 |
| 9R46 | 10850 | 4300 | 3475 | 3800 | 650 | 1460 | 150 |
| 12V46 | 10210 | 4350 | 3820 | 3350 | 800 | 1520 | 155 |
| 16V46 | 11850 | 4350 | 3820 | 3350 | 800 | 1520 | 210 |
| 18V46 | 13830 | 4900 | 3940 | 3350 | 800 | 1520 | 225 |

Range of Wartsila Wichmann Propeller Hubs



Propulsion systems

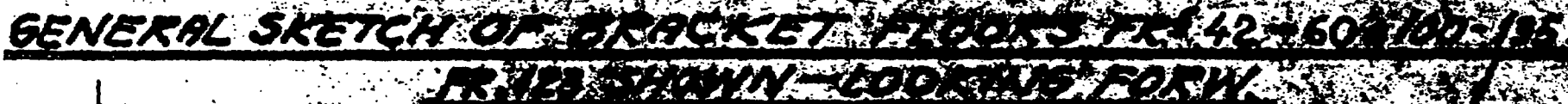
Wartsila Wichmann reduction gears and CP-propellers for Wartsila Diesel propulsion engines



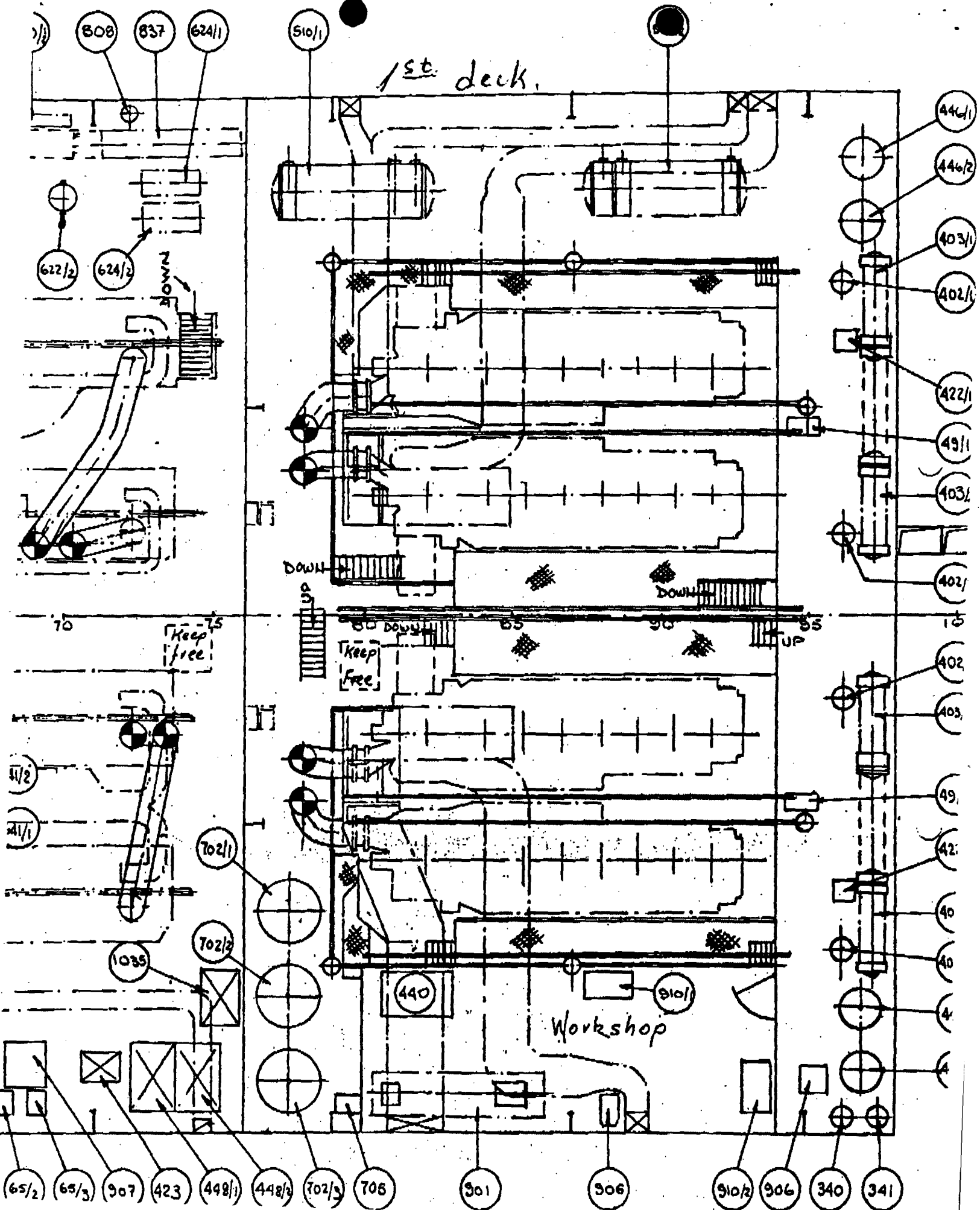
1908 21, 22 10-22 1908, 1909, 1910

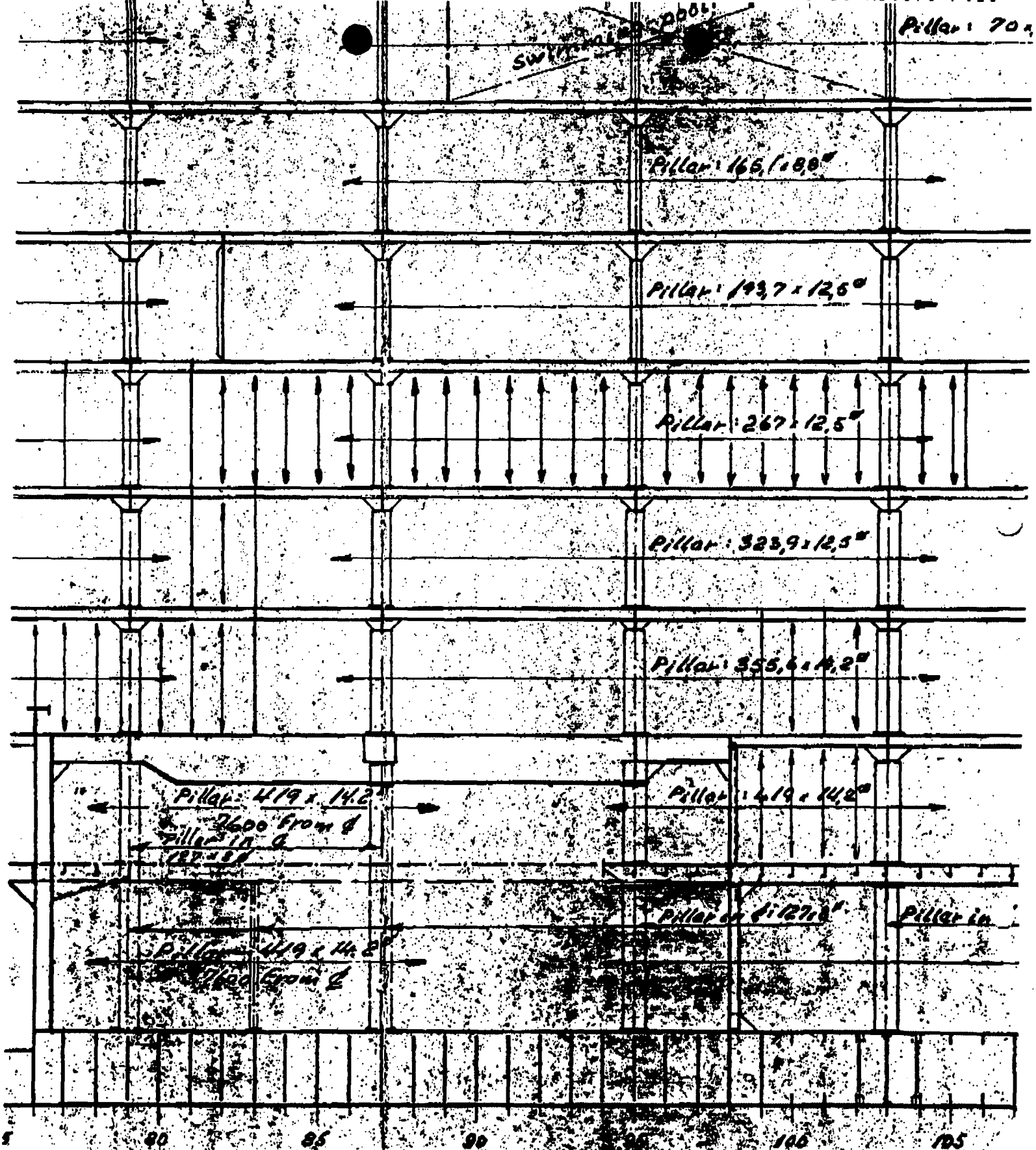


FRAME 80



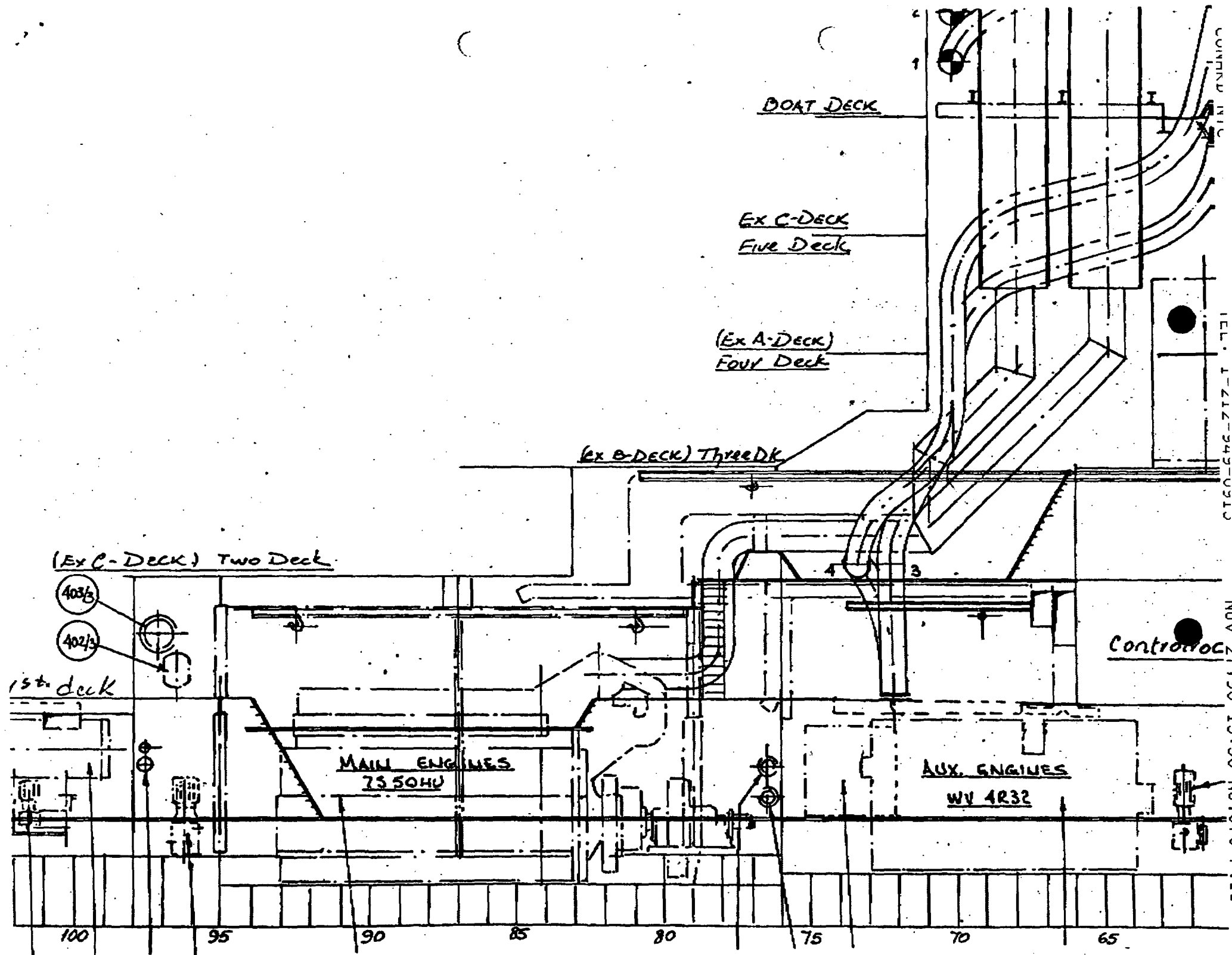
NO. 15-20 NC-ST 06-17-2006





LONGITUDINAL SE

Bulb & Flare



RE-ENGINEING

MAIN ENGINES - 4 N° - RENEWAL

(WARTSILA "VASA" TYPE 9R92D ENGINES OR SIMILAR)

ACCESS REMOVALS

PORT SIDE

1. Prepare and cut necessary opening in the ship side between Fr 90 to Fr 98 approx 18 ft long x 17'3" wide.
2. Cleaning of Engine Room and bilges.
3. Floor plates and bearers to remove, pipelines and valves under floor plates to disconnect and remove and tank top to clean.
4. Above floor plates: 2 n° lub oil/fuel oil separators, 2 n° oil heaters, 1 n° sewage tank complete with pump units, 1 n° lub oil pump, 2 n° oil filters and sludge tanks to remove and restowed on completion. Pipe systems and valves between Engines and between outboard engine and shipside to be removed and restowed on completion. Approx 200 runs of Multi core electrical cables to crop, mark and reconnect with junction boxes on completion.
5. First platform deck complete With access ladders and handrails to be cropped from place and removed/restowed. Storage rack for Engine Room tools to be removed. 1 n° Jacket Cooler to be removed. Pipe systems with valves and ventilation trunking between Outboard Engine/shipside to remove and restow.

STARBOARD SIDE

1. Prepare and cut necessary opening in shipside similar to Port Side.
2. Clean Engine Room and bilges.
3. Floor plates and bearers to remove, pipelines and valves under floor plates to disconnect and remove and tank top to clean.
4. Above floor plates: 2 n° oil filters and sludge tanks, 1 n° sewage tank complete with pump units and 1 n° air compressor to remove and restow. Pipe systems and valves between engines and between Outboard Engine and shipside to remove/restow. Multi core electrical cables to crop, mark and reconnect with junction boxes on completion.

MALTA DRYDOCKS

iii/2

5. First platform deck complete with access ladders and handrails to be cropped from place and removed/restowed. Fwd part of Engine Room workshop complete with Air Condition unit and Drilling machine to be cropped and removed/restowed.

N.B: All removed parts on both Port and Starboard sides are to be transported ashore and back to vessel after handling of new Engines into Engine Room.

DIRECT WORK ON ENGINES

PORT & STBD OUTBOARD AND INBOARD ENGINES

1. Disconnect all holding down bolts and remove.
 2. Disconnect and remove all side chock bolts, remove side chocks and burn off side chocks brackets.
 3. From each Main Engine remove Air Cooler, Turbo charger, Air inlet and exhaust manifold, all attached Cooling, Lub Oil, Fuel Oil and air starting pipes.
 4. Remove fwd part Main Engine piping and all pipes on top of Engines.
 5. Disconnect Main Engine clutches from reduction gearing.
 6. Prepare handling gear and 2 n° sets of 2 n° x 28" high 'I' Beams.
 7. Jack up engines on 'I' beams and secure engines on 'I' beams.
 8. Remove 2 cylinderhead covers and 2 pistons from each engine.
 9. Rig platform from dock bottom level with Engine Room tank top.
 10. Slide engines ashore through shipside openings (approx 73 tons each Engine).
 11. Check measurements of new engines, clean existing foundations and modify to suit new engines.
- N.B: Port and Starboard Outboard Engines to be done concurrently and same for Port and Starboard Inboard Engines.
12. Take delivery of new engines and secure them on the 'I' Beams.

MALTA DRYDOCKS

000/3

13. Lower Engines on the Dock platform and slide each Engine to position (approx 98 tons each engine).
14. Jack up Engines, remove 'I' Beams and lower on sliding wedges.
15. Fit screw bolts and check alignment between Engines/clutches.
16. After undocking check final alignment.
17. Prepare dams for chockfast and pour Philadelphia resin chockfast.
18. After setting, recheck alignment and tight all holding down bolts.
19. Re-assemble clutches.
20. Modify slightly and connect exhaust manifold and all air, cooling, Lub oil and Fuel oil pipes complete with brackets.
21. Modify Engine Room floor plates and bearers.
22. Test run Engines at berth and sea.
23. Remove all gear and clean Engine Room on completion.

NOTE:

- a) Vessel to arrive in a clean condition for hot work.
- b) Modification to clutches and gearing extra.
- c) Engine Builders Service Engineers - Owners' responsibility and for Owners' account.

New PIPING SYSTEMS

C/O PURIFIERS & Controls

REINSULATE PIPES

Renewal of VENTILATION
PIPING

Steel Work
Tanks

Weld Work
BUCKHEADS

New Elec Cables
EXHAUST PIPING
& Supports

Noise DAMPERS

207-518, 4446

CAT
NO. 677
6528

Dave Duvorny

FACSIMILE

NOVEMBER 27, 1990

TO: SOUTHWEST MARINE
ATTN: MR. B. ZAVIN
FAX NO. 503-240-6600

FROM: O. SILNES/CUNARD NY

RE: CUNARD COUNTESS RE-ENGINEING

WITH REFERENCE TO OUR TELEPHONE CONVERSATION TODAY, PLEASE
BE INFORMED THAT THE ACTUAL TYPES OF ENGINES FOR RE-ENGINEING
AS SEEN TODAY ARE AS FOLLOWS:

| | | |
|---------|---------------------|---------------|
| ALT. 1: | 4 OFF WARTSILA VASA | TYPE 9R32D |
| ALT. 2: | 4 OFF CATERPILLAR | TYPE 3612 VEE |
| ALT. 3: | 4 OFF MAN/B+W | TYPE 6140/54 |
| ALT. 4: | 4 OFF WARTSILA VASA | TYPE 4R46 |

PLEASE FIND ON THE FOLLOWING PAGES, WEIGHTS AND MEASUREMENTS
FOR ABOVE MENTIONED ENGINES AND STEEL CONSTRUCTION DRAWINGS
OF THE AREA IN QUESTION.

I ALSO INCLUDE AS A GUIDELINE, MALTA DRYDOCKS PROPOSAL FOR
RE-ENGINEING SINCE THEY KNOW THE VESSEL FROM EARLIER REFITS.

HOWEVER, IT SHOULD BE SUFFICIENT TO OPEN UP THE SHIPSIDE
ONLY ON STARBOARD SIDE AND CONSEQUENTLY LESS REMOVAL OF AUX.
MACHINERY. EXISTING INSTALLATION IS 4 OFF MAN/B+W TYPE
7S50HU.

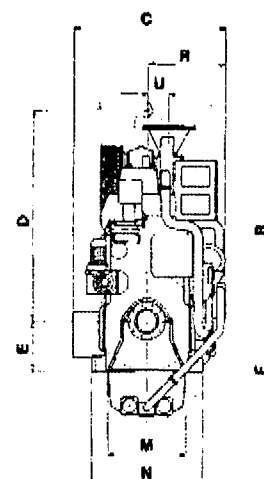
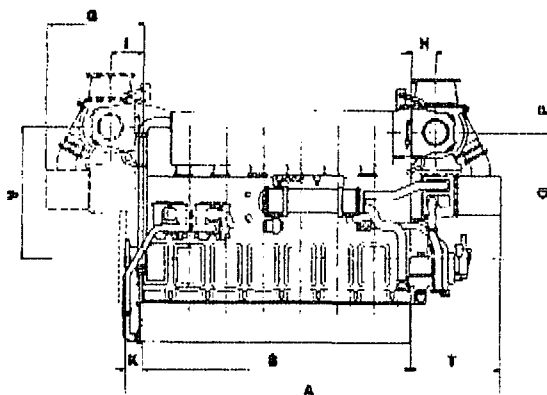
REGARDS

CC: R. CONOLLY

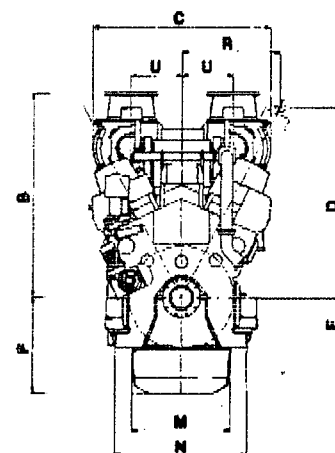
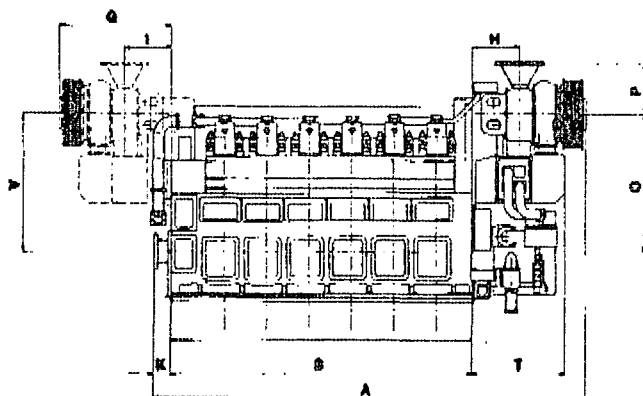
13 PAGES FOLLOWING

4908

NWMAR130753

WÄRTSILÄ DIESEL**WÄRTSILÄ VASA 32
PROJECT GUIDE FOR
MARINE APPLICATIONS****4
Issue 1990****1.5. PRINCIPAL DIMENSIONS AND WEIGHTS****In-line engines (1V58B767 a)**

| Engine | A | B | C | D | E | F | G | H | I | K |
|--------|------|------|------|------|-----|------|------|-----|------|---------------|
| 4R32 | 3825 | 2259 | 1905 | 2550 | 600 | 1135 | 1250 | 285 | 357 | 225 |
| 6R32 | 4955 | 2345 | 1960 | 2550 | 600 | 1135 | 1340 | 325 | 432 | 225 |
| 8R32 | 5985 | 2617 | 1945 | 2550 | 600 | 1135 | 1060 | 444 | 464 | 225 |
| 9R32 | 6485 | 2649 | 2115 | 2550 | 600 | 1135 | 1070 | 490 | 530 | 225 |
| Engine | M | N | O | P | R | S | T | U | V | Weight ton |
| 4R32 | 950 | 1350 | 1645 | 614 | 950 | 2570 | 1030 | 295 | 1645 | 18.5 |
| 6R32 | 950 | 1350 | 1673 | 672 | 950 | 3550 | 1210 | 257 | 1740 | 26.0 |
| 8R32 | 950 | 1350 | 1876 | 741 | 950 | 4530 | 1235 | 218 | 1898 | 35.5 |
| 9R32 | 950 | 1350 | 1835 | 814 | 950 | 5020 | 1250 | 212 | 1905 | 40.0 |

V-engines (1V58B768)

| Engine | A | B | C | D | E | F | G | H | I | K |
|--------|------|------|------|------|-----|------|------|-----|-----|---------------|
| 12V32 | 5686 | 2503 | 2590 | 2330 | 600 | 1150 | 1491 | 621 | 621 | 225 |
| 16V32 | 6806 | 2673 | 2340 | 2330 | 600 | 1150 | 1491 | 621 | 621 | 225 |
| 18V32 | 7440 | 2795 | 2470 | 2330 | 600 | 1150 | 1565 | 555 | 555 | 225 |
| Engine | M | N | O | P | R | S | T | U | V | Weight ton |



CATERPILLAR

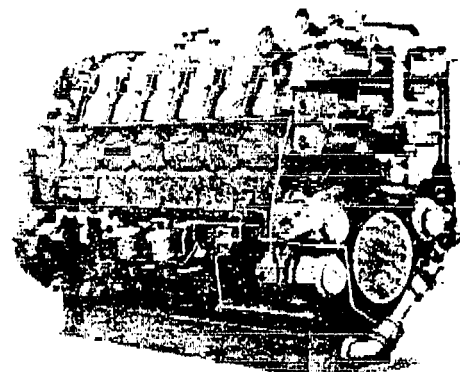
MARINE PROPULSION ENGINE

3600

 1700-8860 hp
1270-4965 kW

SPECIFICATIONS

| | | |
|--|--------------------------|-------------|
| Bore — mm (in) | 280 | (11.0) |
| Stroke — mm (in) | 300 | (11.8) |
| Displacement/Cylinder — L (in ³) | 18.5 | (1127) |
| Compression Ratio | 13:1 | |
| Aspiration | Turbocharged-Aftercooled | |
| Rotation | ccw or cw | |
| Low Idle Speed — rpm | 300-400 | |
| Rated Speed — rpm | 700-1000 | |
| Average Piston Speed — m/s (ft/s) | 7.0-10.0 | (23-32.8) |
| bmeq — bar (psi) | | |
| (Continuous Service) | 18.2-19.6 | (263-285) |
| (Maximum Continuous) | 20.0-21.7 | (290-314) |
| bsfc (with pumps) — g/kW-h (lb/hp-h) | | |
| (Continuous Service) | 190-194 | (.313-.319) |
| (Maximum Continuous) | 189-195 | (.311-.322) |



3606 Shown

PERFORMANCE DATA*

3606 In-Line

| Rated rpm | 1000 | | | 900 | | | 800 | | | 700 | | |
|--|------|------|------|------|------|------|------|------|------|------|------|------|
| | kW | mhp | bhp | kW | mhp | bhp | kW | mhp | bhp | kW | mhp | bhp |
| Continuous Service or ISO Standard Rating | 1680 | 2285 | 2250 | 1570 | 2135 | 2100 | 1420 | 1930 | 1900 | 1270 | 1725 | 1700 |
| Maximum Continuous or ISO Fuel Stop Rating | 1845 | 2510 | 2475 | 1725 | 2345 | 2310 | 1560 | 2120 | 2090 | 1400 | 1905 | 1880 |

3608 In-Line

| Rated rpm | 1000 | | | 900 | | | 800 | | | 700 | | |
|--|------|------|------|------|------|------|------|------|------|------|------|------|
| | kW | mhp | bhp | kW | mhp | bhp | kW | mhp | bhp | kW | mhp | bhp |
| Continuous Service or ISO Standard Rating | 2240 | 3045 | 3000 | 2090 | 2840 | 2800 | 1890 | 2570 | 2530 | 1680 | 2285 | 2250 |
| Maximum Continuous or ISO Fuel Stop Rating | 2485 | 3380 | 3330 | 2300 | 3130 | 3080 | 2080 | 2830 | 2790 | 1850 | 2515 | 2480 |

3612 VEE

| Rated rpm | 1000 | | | 900 | | | 800 | | | 700 | | |
|--|------|------|------|------|------|------|------|------|------|------|------|------|
| | kW | mhp | bhp | kW | mhp | bhp | kW | mhp | bhp | kW | mhp | bhp |
| Continuous Service or ISO Standard Rating | 3355 | 4560 | 4500 | 3135 | 4260 | 4200 | 2840 | 3880 | 3800 | 2535 | 3450 | 3400 |
| Maximum Continuous or ISO Fuel Stop Rating | 3690 | 5020 | 4950 | 3450 | 4690 | 4625 | 3125 | 4250 | 4190 | 2600 | 3805 | 3760 |

3616 VEE

| Rated rpm | 1000 | | | 900 | | | 800 | | | 700 | | |
|--|------|------|------|------|------|------|------|------|------|------|------|------|
| | kW | mhp | bhp | kW | mhp | bhp | kW | mhp | bhp | kW | mhp | bhp |
| Continuous Service or ISO Standard Rating | 4475 | 6085 | 6000 | 4160 | 5685 | 5600 | 3785 | 5150 | 5075 | 3360 | 4570 | 4500 |
| Maximum Continuous or ISO Fuel Stop Rating | 4965 | 6750 | 6660 | 4600 | 6255 | 6170 | 4165 | 5665 | 5580 | 3700 | 5030 | 4960 |

RATING CONDITIONS

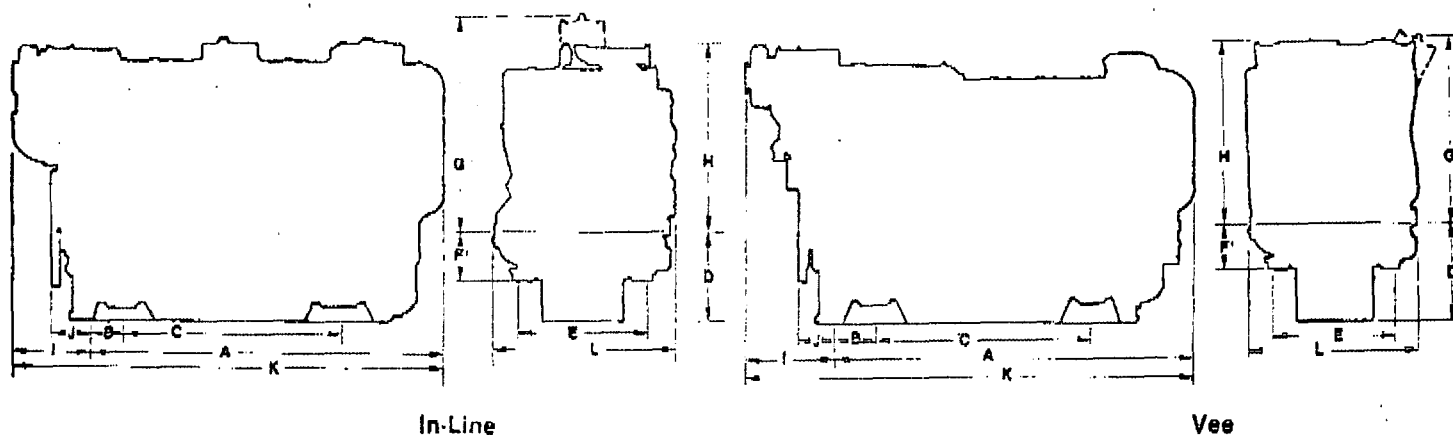
Ratings are based on SAE J1349 standard conditions of 100 kPa (29.61 in Hg) and 25°C (77°F). These ratings also apply at ISO 3046/1, DIN 6271 and BS 5514 standard conditions of 100 kPa (29.61 in Hg), 27°C (81°F) and 60% relative humidity.

Ratings also meet classification society maximum temperature requirements of 45°C (113°F) ambient temperature and 32°C (90°F) sea water temperature.

Fuel consumption is based on ISO 3046/1 with +5% tolerance for fuel having an LHV of 42 780 kJ/kg (18,390 Btu/lb) and weighing 838.9 g/liter (7.001 lbs/U.S. gal).

*Additional ratings available. Contact your Caterpillar dealer.

3600 Marine Propulsion 1700 — 6660 hp



DIMENSIONS

| | A | B | C | D | E | F1 | F2 | F3 | G | H | I | J | K | L | W |
|---------------------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|-------|-----------|
| 3606 In-Line | | | | | | | | | | | | | | | |
| mm | 3261 | 265 | 2050 | 841 | 1120 | 405 | 308 | 450 | 2035 | 1785 | 715 | 360 | 3976 | 1748 | kg 15 680 |
| in | 128.39 | 10.43 | 80.71 | 33.11 | 44.09 | 15.94 | 12.13 | 17.72 | 80.12 | 70.28 | 28.15 | 14.17 | 156.54 | 68.82 | lb 34,500 |

3608 In-Line

| | | | | | | | | | | | | | | | |
|----|--------|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|-------|-----------|
| mm | 4081 | 265 | 2870 | 841 | 1120 | 405 | 308 | 450 | 2035 | 1785 | 715 | 360 | 4796 | 1748 | kg 19 000 |
| in | 160.67 | 10.43 | 112.99 | 33.11 | 44.09 | 15.94 | 12.13 | 17.72 | 80.12 | 70.28 | 28.15 | 14.17 | 188.82 | 68.82 | lb 41,800 |

3612 VEE

| | | | | | | | | | | | | | | | |
|----|--------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|-------|--------|-------|-----------|
| mm | 3657 | 300 | 2300 | 976 | 1120 | 405 | 308 | 450 | 1850 | 1900 | 905 | 360 | 4562 | 1714 | kg 25 140 |
| in | 143.98 | 11.81 | 90.55 | 38.43 | 44.09 | 15.94 | 12.13 | 17.72 | 72.83 | 74.8 | 35.63 | 14.17 | 179.61 | 67.48 | lb 55,300 |

3616 VEE

| | | | | | | | | | | | | | | | |
|----|-------|-------|--------|-------|-------|-------|-------|-------|-------|------|-------|-------|--------|-------|-----------|
| mm | 4577 | 300 | 3220 | 976 | 1120 | 405 | 308 | 450 | 1850 | 1900 | 905 | 360 | 5482 | 1714 | kg 29 950 |
| in | 180.2 | 11.81 | 126.77 | 38.43 | 44.09 | 15.94 | 12.13 | 17.72 | 72.83 | 74.8 | 35.63 | 14.17 | 215.83 | 67.48 | lb 65,900 |

- C centerline distance between mounting feet
 F1, F2, F3 optional mounting dimensions
 G removal distance for piston
 J distance from flywheel mounting face to cylinder block rear face
 W approximate dry weight of engine with attachments such as filters, oil cooler, flywheel, pumps, etc.

MARINE CERTIFICATION

Ratings are marine classification society approved by ABS, BV, DnV, GL, LRS, NKK and RINA. These societies have also granted 3600 factory line production approval which eliminates requirement for society surveyor witness test.

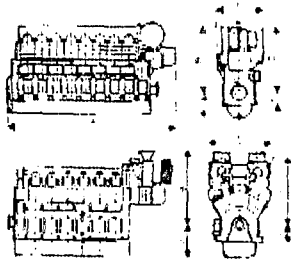
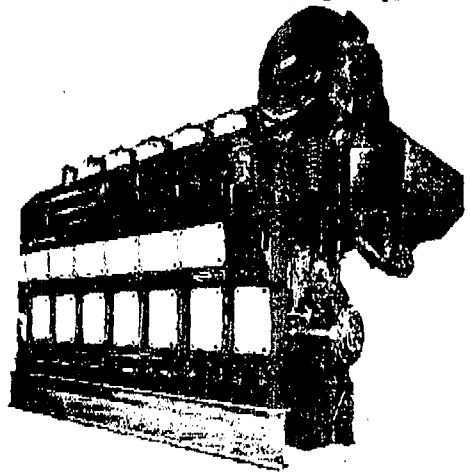
FUEL CAPABILITY

The 3600 Family of Engines is developed for marine propulsion, without power deration, on fuel with viscosity and contaminants up to CIMAC Class k55 (700 cSt at 50°C).

NWMAR130757

Main data

WARTSILA VASA 4R46



MAIN DATA:

| | |
|-------------------------|--------------------|
| Cylinder bore | 460 mm |
| Piston stroke | 580 mm |
| Speed | 450, 500, 514 rpm |
| Mean effective pressure | 25, 22.5, 21.9 bar |
| Piston speed | 8.7, 9.7, 9.9 m/s |
| FUEL SPECIFICATION: | |
| Fuel oil | 50°C/700 cSt |
| Gas | 100°C/7000 sRU |

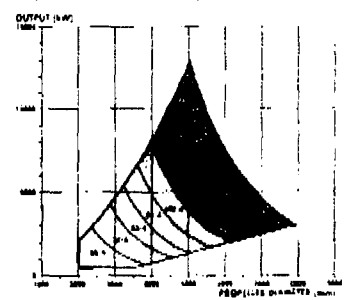
RATED POWER: PROPULSION ENGINES

| Engine type | Output in kW (BHP) at | | | | | |
|-------------|-----------------------|-------|---------|-------|---------|-------|
| | 450 rpm | | 500 rpm | | 514 rpm | |
| Output | kW | (BHP) | kW | (BHP) | kW | (BHP) |
| 4R46 | 3620 | 4920 | 3620 | 4920 | 3620 | 4920 |
| 6R46 | 5430 | 7380 | 5430 | 7380 | 5430 | 7380 |
| 8R46 | 7240 | 9840 | 7240 | 9840 | 7240 | 9840 |
| 9R46 | 8145 | 11070 | 8145 | 11070 | 8145 | 11070 |
| 12V46 | 10860 | 14760 | 10860 | 14760 | 10860 | 14760 |
| 16V46 | 14480 | 19680 | 14480 | 19680 | 14480 | 19680 |
| 18V46 | 16200 | 22140 | 16200 | 22140 | 16200 | 22140 |

PRINCIPAL ENGINE DIMENSIONS (mm) AND WEIGHTS (tonnes)

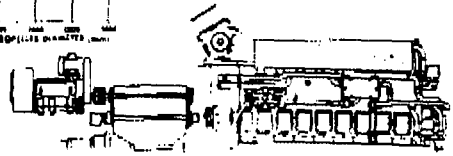
| Engine type | A | B | C | D | E | F | Weight/ton |
|-------------|-------|------|------|------|-----|------|------------|
| 4R46 | 6400 | 4020 | 2990 | 3800 | 650 | 1460 | 75 |
| 6R46 | 8000 | 4120 | 2970 | 3800 | 650 | 1460 | 95 |
| 8R46 | 10030 | 4300 | 3475 | 3800 | 650 | 1460 | 150 |
| 9R46 | 10850 | 4300 | 3475 | 3800 | 650 | 1460 | 150 |
| 12V46 | 10200 | 4350 | 3520 | 3800 | 800 | 1520 | 155 |
| 16V46 | 11850 | 4350 | 3820 | 3850 | 800 | 1520 | 210 |
| 18V46 | 13830 | 4970 | 3950 | 3850 | 800 | 1520 | 225 |

Range of Wartsila Wichmann Propeller Units

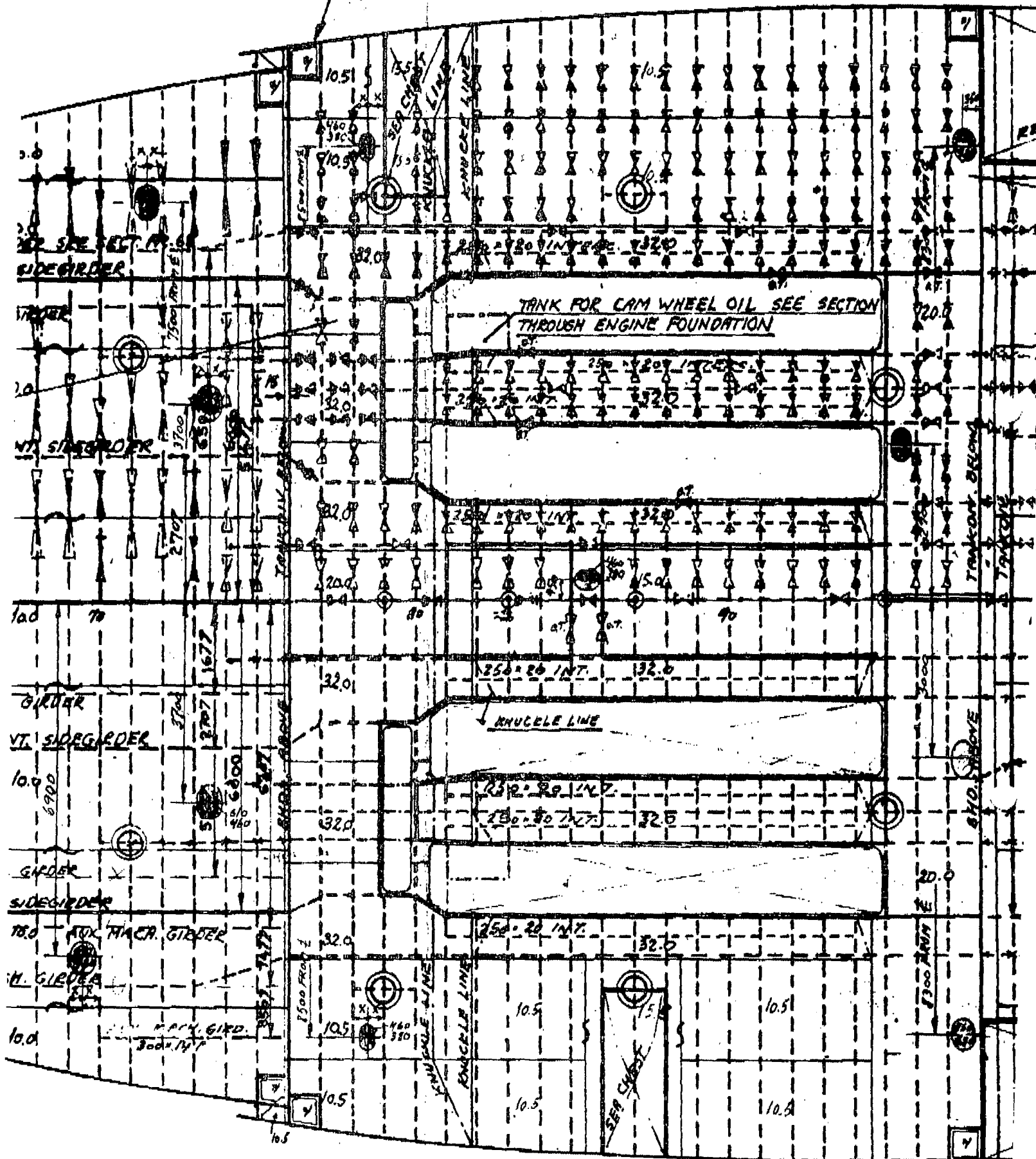


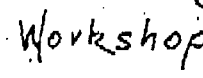
Propulsion systems

Wartsila Wichmann reduction gears and CP-propellers for Wartsila Diesel propulsion engines



MADE BY 120% PL. WELD. T. AND
ARE TO BE MIN. 0.17M³ WITH A
MAX. DEPTH BELOW TT. OF 460MM.





Pillar: 70

SWIMMING POOL

Pillar: 165, 180°

Pillar: 193, 7 x 12, 6°

Pillar: 267, 12, 5°

Pillar: 323, 9, 12, 5°

Pillar: 355, 6, 14, 2°

Pillar: 419 x 14, 2°

2600 from d

Pillar in d

127, 8°

Pillar: 419 x 14, 2°

Pillar on d: 127, 8°

Pillar in

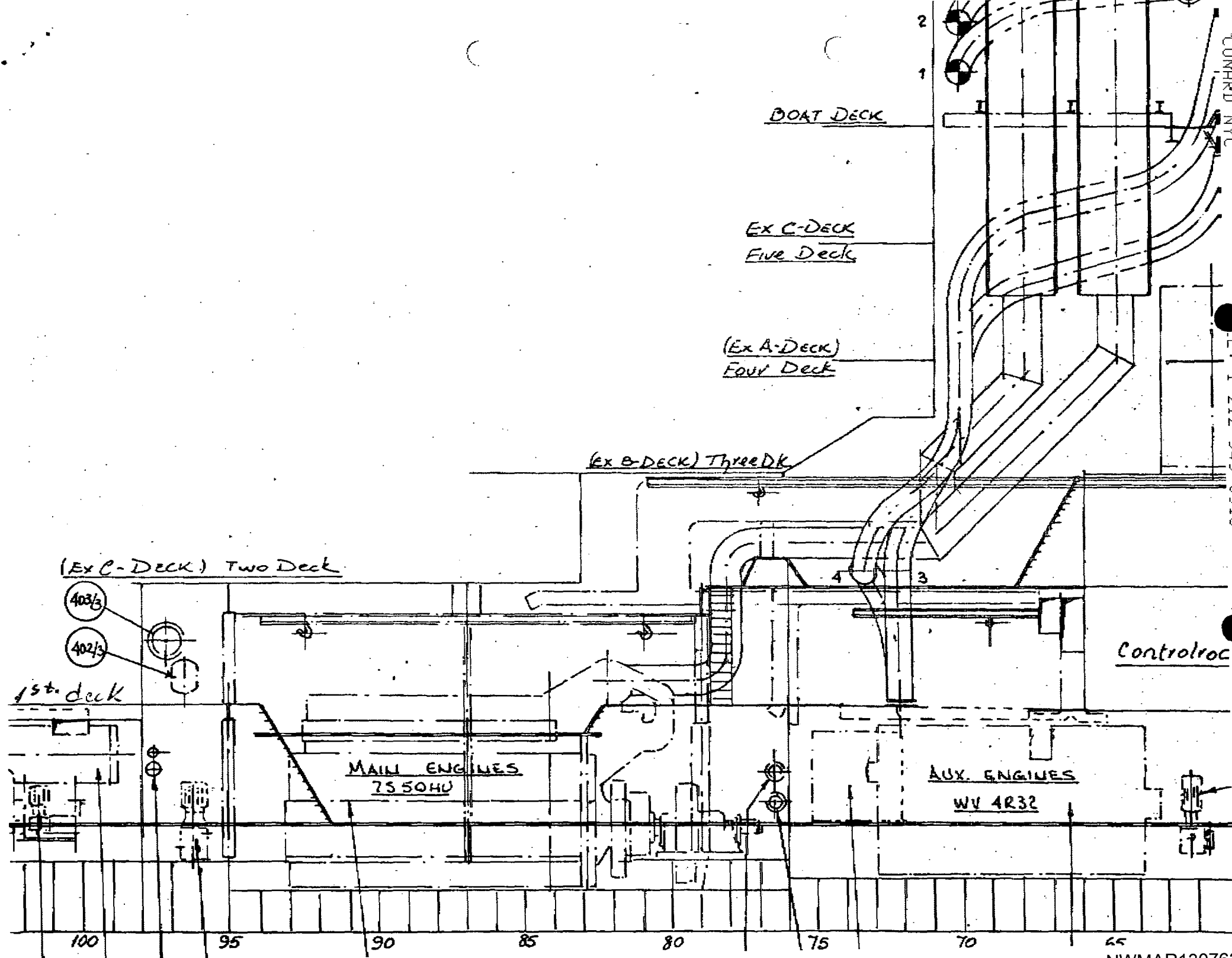
Pillar: 419 x 14, 2°

2600 from d

LONGITUDINAL SEC

Bulb & Flats

XEROX TELECOPIER 296 ; 11-27-90; 1:00 PM;
CUNARD NYC
TEL: 1-212-949-0915
1 212 949 0915
27.90 15:50 No.073 P.11
503240660 ; #11



RE-ENGINEING

MAIN ENGINES - 4 N° - RENEWAL

(WARTSILA "VASA" TYPE 9R32D ENGINES OR SIMILAR)

ACCESS REMOVALS

PORT SIDE

1. Prepare and cut necessary opening in the ship side between Fr 90 to Fr 98 approx 18 ft long x 17'3" wide.
2. Cleaning of Engine Room and bilges.
3. Floor plates and bearers to remove, pipelines and valves under floor plates to disconnect and remove and tank top to clean.
4. Above floor plates: 2 n° lub oil/fuel oil separators, 2 n° oil heaters, 1 n° sewage tank complete with pump units, 1 n° lub oil pump, 2 n° oil filters and sludge tanks to remove and restowed on completion. Pipe systems and valves between Engines and between outboard engine and shipside to be removed and restowed on completion. Approx 200 runs of Multi core electrical cables to crop, mark and reconnect with junction boxes on completion.
5. First platform deck complete with access ladders and handrails to be cropped from place and removed/restowed. Storage rack for Engine Room tools to be removed. 1 n° Jacket Cooler to be removed. Pipe systems with valves and ventilation trunking between Outboard Engine/shipside to remove and restow.

STARBOARD SIDE

1. Prepare and cut necessary opening in shipside similar to Port Side.
2. Clean Engine Room and bilges.
3. Floor plates and bearers to remove, pipelines and valves under floor plates to disconnect and remove and tank top to clean.
4. Above floor plates: 2 n° oil filters and sludge tanks, 1 n° sewage tank complete with pump units and 1 n° air compressor to remove and restow. Pipe systems and valves between engines and between Outboard Engine and shipside to remove/restow. Multi core electrical cables to crop, mark and reconnect with junction boxes on completion.

MALTA DRYDOCKS

.../2

5. First platform deck complete with access ladders and handrails to be cropped from place and removed/restowed. Fwd part of Engine Room workshop complete with Air Condition unit and Drilling machine to be cropped and removed/restowed.

N.B: All removed parts on both Port and Starboard sides are to be transported ashore and back to vessel after handling of new Engines into Engine Room.

DIRECT WORK ON ENGINES

PORT & STBD OUTBOARD AND INBOARD ENGINES

1. Disconnect all holding down bolts and remove.
 2. Disconnect and remove all side chock bolts, remove side chocks and burn off side chocks brackets.
 3. From each Main Engine remove Air Cooler, Turbo charger, Air inlet and exhaust manifold, all attached Cooling, Lub Oil, Fuel Oil and air starting pipes.
 4. Remove fwd part Main Engine piping and all pipes on top of Engines.
 5. Disconnect Main Engine clutches from reduction gearing.
 6. Prepare handling gear and 2 n° sets of 2 n° x 28" high 'I' Beams.
 7. Jack up engines on 'I' beams and secure engines on 'I' beams.
 8. Remove 2 cylinderhead covers and 2 pistons from each engine.
 9. Rig platform from dock bottom level with Engine Room tank top.
 10. Slide engines ashore through shipside openings (approx 73 tons each Engine).
 11. Check measurements of new engines, clean existing foundations and modify to suit new engines.
- N.B: Port and Starboard Outboard Engines to be done concurrently and same for Port and Starboard Inboard Engines.
12. Take delivery of new engines and secure them on the 'I' Beams.

MALTA DRYDOCKS

.../3

13. Lower Engines on the Dock platform and slide each Engine to position (approx 38 tons each engine).
14. Jack up Engines, remove 'I' Beams and lower on sliding wedges.
15. Fit screw bolts and check alignment between Engines/clutches.
16. After undocking check final alignment.
17. Prepare dams for chockfast and pour Philadelphia resin chockfast.
18. After setting, recheck alignment and tight all holding down bolts.
19. Re-assemble clutches.
20. Modify slightly and connect exhaust manifold and all air, cooling, Lub oil and Fuel oil pipes complete with brackets.
21. Modify Engine Room floor plates and bearers.
22. Test run Engines at berth and sea.
23. Remove all gear and clean Engine Room on completion.

NOTE:

- a) Vessel to arrive in a clean condition for hot work.
- b) Modification to clutches and gearing extra.
- c) Engine Builders Service Engineers - Owners' responsibility and for Owners' account.

NOVEMBER 26, 1990

F A C S I M I L E

TO: BILL ZAVIN - NORTHWEST MARINE
FAX NO. (503) 240-6600

FROM: RON CONOLLY - CUNARD LINE - NEW YORK

RE: CUNARD COUNTESS

FURTHER TO OUR TELEPHONE CONVERSATION, THE FOLLOWING IS
RELEVANT:

- TYPE OF WORK - REPLACE EXISTING MAIN ENGINES WITH
NEW TYPE. CARRY OUT GENERAL
REPAIRS AND REFURBISHMENT,
INCLUDING UPGRADE OF FURNISHING
AREAS.
- ANTICIPATED - DIFFICULT TO QUANTIFY, BUT ABOUT
EXPENDITURE \$10 MILLION.
- WHEN - DEPENDS UPON DELIVERY OF
REPLACEMENT ENGINES, BUT
ANTICIPATE ANYTIME FROM AUGUST TO
DECEMBER 1991.

TRUST THIS PROVIDES SUFFICIENT INFORMATION.

REGARDS,



NWMAR130767

NORTHWEST MARINE IRON WORKS

OUTSTANDING GOVERNMENT ISSUES

U. S. NAVY

| | | | |
|---------|--------|------------------|--------------------|
| DULUTH | (5/86) | \$ 5,864,969 | |
| CUSHING | (7/86) | 1,052,403 | (1) |
| STORIS | (9/86) | 2,197,276 | (2) |
| FOSTER | (7/88) | 1,339,490 | → \$ 4,163,050 (4) |
| OKINAWA | (-) | <u>2,212,657</u> | (3) |
| | | \$ 12,666,795 | → \$ 15,490,355 |

MILITARY SEALIFT COMMAND

| | | |
|-----------|---------|----------------|
| MERCY | (4/88) | \$ 104,000 |
| KAWISHIWI | (8/88) | 1,175,241 |
| HIGGINS | (10/88) | <u>203,336</u> |
| | | \$ 1,482,577 |

| | | |
|----------------|---------------|-----------------|
| GRAND TOTAL(S) | \$ 14,149,372 | → \$ 16,972,932 |
|----------------|---------------|-----------------|

NOTES:

- (1) Settled, modification not received.
- (2) Includes \$207,415 settlement, modification not received.
- (3) Includes \$118,972 settlement, modification not received.
- (4) Costs documented on Forms 1411.

NORTHWEST MARINE IRON WORKS

OUTSTANDING GOVERNMENT ISSUES

U.S. NAVY

| | REA Value | Gov't Position | △ | Billable |
|---|---------------------|--------------------------------------|--------------|-------------------|
| USS DULUTH (LPD-6) (Delivered 5/86) | \$ 5,864,969 | \$ 172,358 | \$ 5,692,611 | \$ -- |
| USS CUSHING (DD-985) (Delivered 7/86) | \$ 1,052,403 | (Awaiting Contract Modification) | | \$ 1,052,403 |
| USCG STORIS (WMEC-38) (Delivered 9/86) | \$ 1,944,861 | (To Be Submitted Week of 12/5) | | \$ -- |
| | 207,415 | (Awaiting Contract Modification) | | 207,415 |
| | 45,000 | Price Proposals Yet To Be Negotiated | | -- |
| | <u>\$ 2,197,276</u> | | | <u>\$ 207,415</u> |

| | Max Mod Value | 1411 Value |
|---|--------------------|--------------------|
| USS PAUL F. FOSTER (DD-964) (Delivered 7/88) | | |
| a) VLS Kits | \$ 489,390 | \$ 736,045 |
| b) Sonar Kit | 628,394 | 576,857 |
| c) LAMPS Kit | 370,351 | 872,928 |
| d) Contract Extension | 1,939,846 | 4,092,577 |
| e) #2 Generator | <u>203,672</u> | <u>176,806</u> |
| | \$ 3,631,653 | \$ 6,455,213 |
| Unilateral Price Determination SupShip Seattle | <u>- 2,292,163</u> | <u>- 2,292,163</u> |
| | \$ 1,339,490 | \$ 4,163,050 |

NORTHWEST MARINE IRON WORKS

OUTSTANDING GOVERNMENT ISSUES

U.S. NAVY (Continued)

USS OKINAWA (LPH-3)
(6/88 - 3/89)

REA Value

| | | |
|------------------|--------------|--------------------------------------|
| a) Defueling | \$ 1,258,685 | * Submitted 09/19/88 |
| b) Asbestos | 118,972 | * Settled 12/1/88 at asked for price |
| c) Late Move-Off | 300,000 | * Not yet submitted; EDS 12/23/88 |
| d) Freeboard | 535,000 | * To be submitted week of 12/5/88 |
| | <hr/> | |
| | \$ 2,212,657 | |

NORTHWEST MARINE IRON WORKS

OUTSTANDING GOVERNMENT ISSUES

MILITARY SEALIFT COMMAND

| | Value | Gov't Position | △ | Billable |
|---|------------------|-------------------------------|---|----------|
| USNS MERCY (T-AH 19) (Delivered 4/88) | \$ 74,000 | (Withheld For Drawings) | | |
| | <u>30,000</u> | (Withheld For Spare Parts) | | |
| | \$ 104,000 | | | |
| USNS KAWISHIWI (T-AO 146) (Delivered 8/88) | \$ 452,539 | (REA/Late Contract Award) | | |
| | 185,061 | (REA/Drydock Issues) | | |
| | 178,057 | (REA/Testing Delays) | | |
| | 96,211 | (REA/Propeller Shaft) | | |
| | <u>263,373</u> | Retention Withheld | | |
| | \$ 1,175,241 | | | |
| USNS HIGGINS (T-AO 190) (Delivered 10/88) | \$ 99,061 | Retention Withheld | | |
| | <u>104,275</u> | Unbilled Progress | | |
| | \$ 203,336 | | | |
| TOTAL | \$ 1,482,577 | | | |

R 072344Z JUL 88 ZYB

FM COMNAVSURFPAC SAN DIEGO CA (COMMANDER NAVAL SURFACE FORCE PACIFIC)

TO RHWZMQQ/USS PAUL F FOSTER

RHWIHHHA/SUPSHIP SEATTLE WA

RUCLRFA/NORTHWEST MARINE IRON WORKS

5555 N CHANNEL AVENUE BLDG 2

PORTLAND OR 97217

INFO RUENAAAA/CNO WASHINGTON DC (CHIEF OF NAVAL OPERATIONS)

RHHMBRA/CINCPACFLT PEARL HARBOR HI (COMMANDER IN CHIEF U.S. PACIFIC FLEET)

RULSSAA/COMNAVSEASYS COM WASHINGTON DC (COMMANDER NAVAL SEA SYSTEMS COMMAND)

RUWDXAA/COMDESRON THREE THREE (COMMANDER DESTROYER SQUADRON 33)

ACCT NA-CNRF

UNCLAS //N04710//

SUBJ: ROH COMPLETION

A. SUPSHIP SEATTLE WA 051658Z JUL 88 NOTAL

1. NAVSEA for PMS 314 and SEA 07. OPNAV for OP321.

2. Ref A reports completion of USS PAUL F. FOSTER'S FY 87 regular overhaul at Northwest Marine Iron Works Portland, Oregon at originally scheduled CNO completion date 1 July 1988.

3. As the first such on-time redelivery of a PACFLT SPRUANCE Class ship from the massive Vertical Launch System (VLS)/SQQ-89/LAMPS MK III ShipAlt package special recognition is in order.

4. For PAUL F. FOSTER: Your in-depth management and detailed involvement in the successful accomplishment of the complex out-of-homeport overhaul was refreshing to observe. You have optimized my guidance in taking responsibility for your availability. PAUL F. FOSTER'S LOE performance was superlative as have been all evolutions during this past demanding year. You have been innovative and tenacious in accomplishing training, upgrading your supply support and in maintaining shipboard cleanliness and safety.

5. For SupShip Seattle: Your on-site team has set new standards for project management in the professional administration of a dynamic, interdependent overhaul package. The maintaining of PAUL F. FOSTER'S contract current on an almost daily basis has protected the rights of the Government and the contractor while concurrently satisfying all customers.

6. For NMIW: We know who ultimately "turns the wrenches" to get out the ship. By my personal observation, NMIW has come the farthest of any West Coast private sector contractor in taking aboard my Navy ship repair cost-saving initiatives while continuing to provide responsive quality workmanship. As the Rose Festival demonstrates to my visiting ships each year, Portland is a super host city. Keep up the good work.

7. VAdm G. W. Davis Jr.



copy
TO
JAW
WA FRAME

MR LABRAN

6000
500
400
400
300
200
101

AN DIEGO CA

Sea 91

13
15

NWMMAR130773



410
DEPARTMENT OF THE NAVY
SUPERVISOR OF SHIPBUILDING, CONVERSION, AND REPAIR, USN
SEATTLE, WASHINGTON 98115-5003

IN REPLY REFER TO:
NHBS-8197/DD964
Ser 401-4512
08 Nov 88

From: Supervisor of Shipbuilding, Conversion, and Repair, USN, Seattle
To: Commander, Naval Sea Systems Command (PMS 314)

Subj: USS PAUL F. FOSTER (DD-964) CONTRACT NO0024-85-H-8197 JOB ORDER EH29
PERFORMANCE FEE EVALUATION BOARD REPORT; FIFTH PERIOD

Ref: (a) Clause H-20 Determination of Performance Fee

1. The subject Performance Fee Evaluation Board (PFEB) convened on 03 November 1988 and evaluated the contractor's performance on subject contract for the fifth period, 01 May 1988 through 29 September 1988.

2. The PFEB recommends a numerical rating of 98.8% and an adjective rating of Excellent, based on three category scores weighted in accordance with paragraph (f), reference (a) as follows:

a. Schedule Performance: Numerical rating of 100%

(1) Areas of Commendable Performance:

(a) The contractor met all planned milestones for this period with the most significant being LOE, Sea Trials, and Completion of RCH.

(b) The contractor has had an outside consultant review his scheduling and progressing system and has begun implementation of the recommendations, albeit too late for this overhaul. Nevertheless, this is a positive step forward for the contractor.

(c) The contractor has been effective in integrating his work with that of ship's force to meet milestones during this period.

(d) The contractor's effort in assisting ship's force to prepare for sea trials was outstanding, considering manning was low at this point in the RCH.

(e) The contractor's responses to sea trial related problems were commendable.

(f) The contractor was very responsive to last minute VLS problems/discrepancies upon receipt of contract changes.

b. Technical Performance: Numerical rating of 98%

(1) Areas of Commendable Performance:

(a) The contractor demonstrated excellent effectiveness in fulfilling the in-process, as well as at-completion, quality requirements of the contract. Corrective action requests were responded to in a timely manner.

Subj: USS PAUL F. FOSTER (DD-964) CONTRACT N00024-85-H-8197 JOB ORDER #H29
PERFORMANCE FEE BOARD EVALUATION REPORT; FIFTH PERIOD

(b) The contractor's performance in the area of completing aviation facility deficiencies, both contractor and government, was commendable, enabling certification of the helicopter flight deck prior to sea trials.

(c) The contractor's effectiveness of repairs and alterations was demonstrated by the way the ship was able to complete its post repair testing and exercises within the originally scheduled time frames. There were no warranty items identified which required more than 24 hours to correct.

(d) The ASW systems major Ship Alteration installations were tested with excellent results during sea trials.

(e) The contractor's correction of identified warranty items was excellent.

(f) The contractor has responded in a positive manner to specific requests on safety, preservation, and cleanliness problems. He has continued to attempt to maintain the ship in a clean state to meet the terms of the contract.

(g) The Propulsion Examining Board graded the USS PAUL F. FOSTER one of the highest they had ever seen. While this is not all due to contractor efforts, it certainly could not have been done without the superlative effort of NMW.

(h) The contractor's quality assurance department has done an outstanding job of observing and reporting discrepancies for correction in on-going work in the weapons area of this overhaul.

(i) The contractor's warehouse personnel remained extremely cooperative. Identification of GFM was accurate and timely. These personnel went out of their way to see that all last minute emergent material was onboard USS PAUL F. FOSTER prior to sail away.

(j) The warehouse was orderly during the entire contract period. Material was always easily located.

c. Management Performance: Numerical rating of 98%

(1) Areas of Commandable Performance:

(a) The contractor has provided pricing data for changes under \$100,000, when requested, in a timely manner and has normally been willing to negotiate fair and reasonable prices.

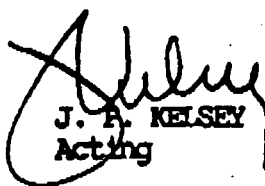
(b) Rarely has anyone associated with this overhaul seen a worker not performing.

Subj: USS PAUL F. FOSTER (DD-964) CONTRACT N00024-85-H-8197 JOB ORDER EH29
PERFORMANCE FEE BOARD EVALUATION REPORT; FIFTH PERIOD

(c) The contractor's management organization was very effective in preventing schedule slippage by shifting manpower to resolve emerging problems. This was especially apparent in the LOE, Aviation Certification inspection, and Sea Trial discrepancy correction areas.

(d) The USS PAUL F. FOSTER was completed on time with excellent quality at a reasonable price.

3. This is the final performance fee board report for an exceptionally successful overhaul.


J. A. KELSEY
Acting

Copy to:
COMDESRON THREE THREE
COMNAVSURFPAC N4

Dry Dock and Berthage Schedule



PORT OF PORTLAND DRY DOCK AND BERTHAGE SCHEDULE

TOTAL SPACE AVAILABLE IN TREATMENT PLANT: 45,000

DATE: 8/07/92

VESSEL CONT. DATE IN DATE OUT ORD'D BY LOA BEAM TONS

DRY DOCK #1 (598')

| | | | | | | | | |
|--|-------|----|-----------|-----------|-----------|-----|----|------|
| | ROGUE | CG | 31-Aug-92 | 04-Sep-92 | DONALDSON | 286 | 76 | 3332 |
|--|-------|----|-----------|-----------|-----------|-----|----|------|

DRY DOCK #3 (661')

| | | | | | | | | |
|--|------------------|-----|-----------|-----------|-----------|-----|----|-------|
| | RIVERHEAD SPIRIT | NWM | 03-Aug-92 | 09-Aug-92 | NUGENT | 660 | 90 | 20572 |
| | KAWISHIWI | CG | 24-Aug-92 | 04-Sep-92 | DONALDSON | 656 | 86 | 19553 |
| | CAPE BORDA | CG | 08-Sep-92 | 11-Sep-92 | DONALDSON | 540 | 76 | 10723 |

| | | | | | | | | |
|-----|-----------------|-----|-----------|-----------|--------|-----|----|-------|
| BID | EXXON GALVESTON | NWM | 14-Sep-92 | 28-Sep-92 | NUGENT | 560 | 95 | 12769 |
| BID | EXXON JAMESTOWN | NWM | 15-Oct-92 | 31-Oct-92 | NUGENT | 715 | 93 | 19733 |

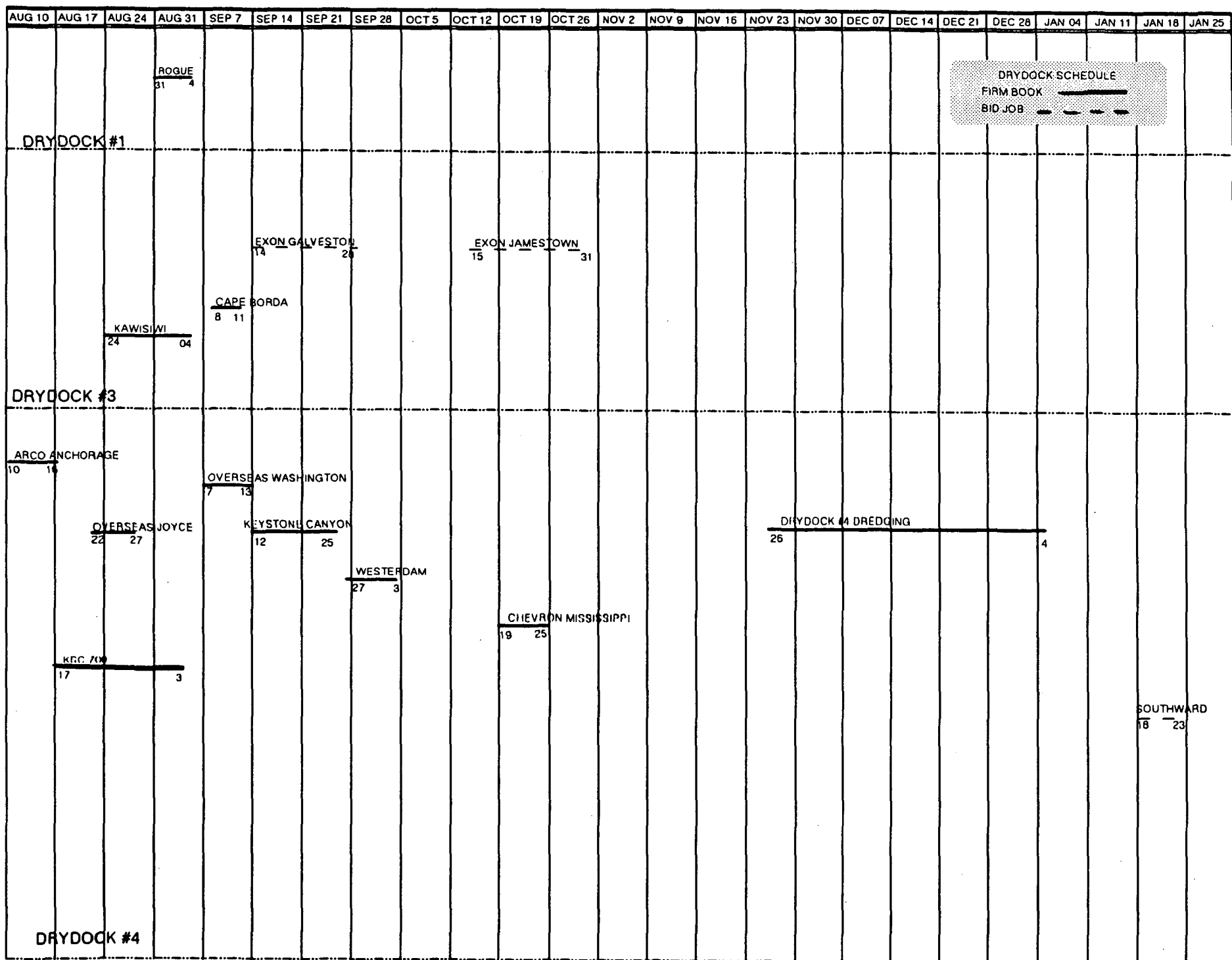
DRY DOCK #4 (982')

| | | | | | | | | |
|---|---------------------|-----|-----------|-----------|-----------|-----|-----|-------|
| | ARCO ANCHORAGE | WSI | 10-Aug-92 | 16-Aug-92 | WILLIAMS | 883 | 138 | 57691 |
| | OVERSEAS JOYCE | WSI | 22-Aug-92 | 27-Aug-92 | WILLIAMS | 626 | 106 | 48017 |
| # | OVERSEAS WASHINGTON | WSI | 07-Sep-92 | 13-Sep-92 | WILLIAMS | 894 | 106 | 44906 |
| # | KEYSTONE CANYON | WSI | 14-Sep-92 | 25-Sep-92 | WILLIAMS | 856 | 173 | 81776 |
| | WESTERDAM | CG | 27-Sep-92 | 03-Oct-92 | DONALDSON | 798 | 95 | 53872 |
| | CHEVRON MISSISSIPPI | WSI | 19-Oct-92 | 25-Oct-92 | WILLIAMS | 810 | 105 | 35589 |
| | DRYDOCK 4 DREDGING | POP | 26-Nov-92 | 04-Jan-93 | TWINE | --- | --- | --- |

| | | | | | | | | |
|-----|-----------|-----|-----------|-----------|----------|-----|-----|-------|
| BID | KSC 700 | NWM | 17-Aug-92 | 03-Sep-92 | NUGENT | 700 | 182 | 42747 |
| BID | SOUTHWARD | WSI | 18-Jan-93 | 23-Jan-93 | WILLIAMS | 538 | 75 | 16607 |

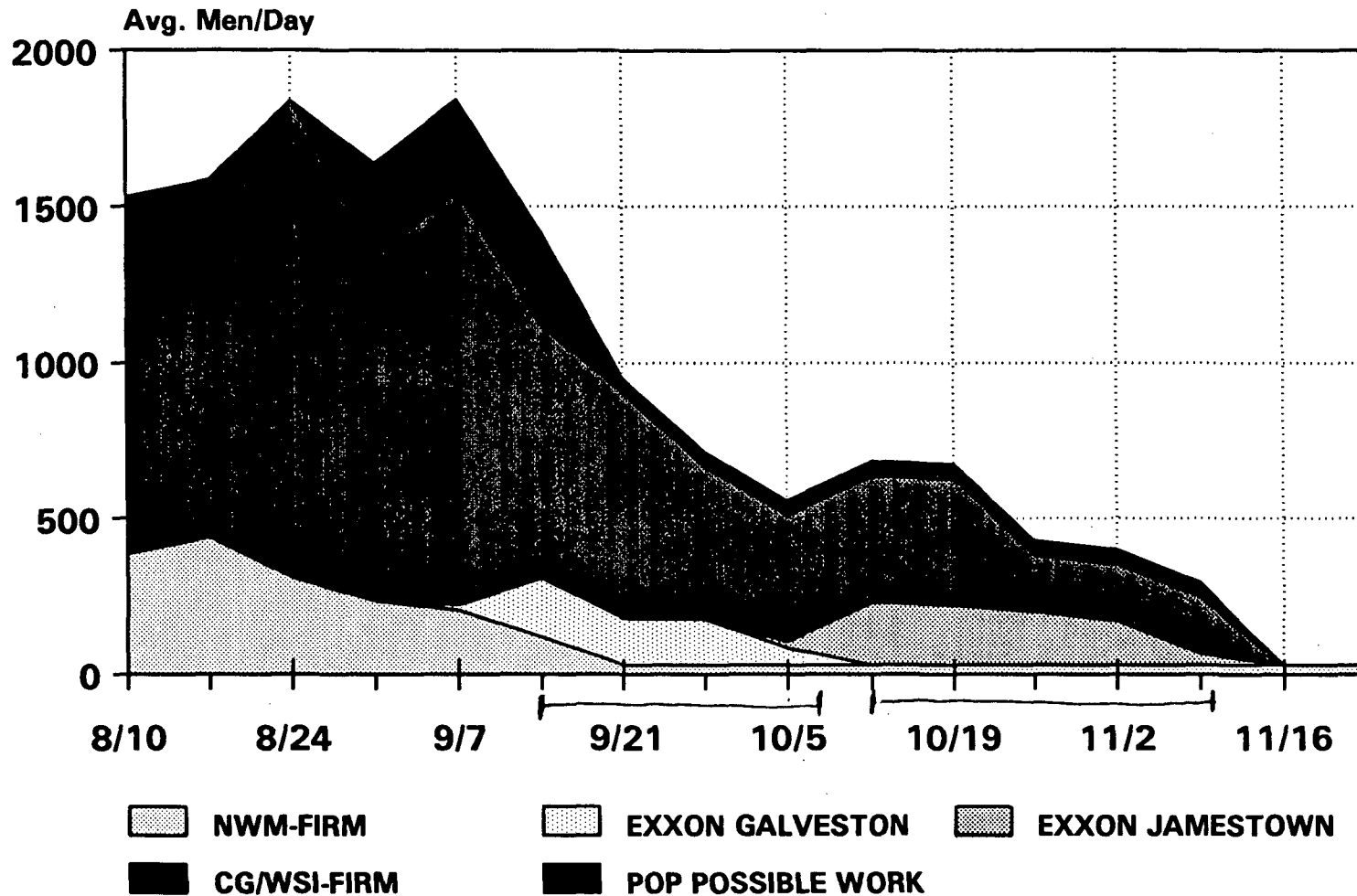
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 BID SHADED SECTION INDICATES JOBS NOT YET CONFIRMED

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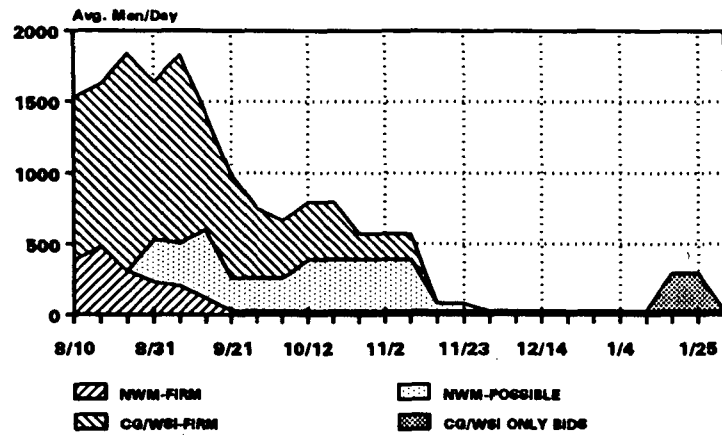


DRYDOCK SCHEDULE
 FIRM BOOK _____
 BID JOB - - - -

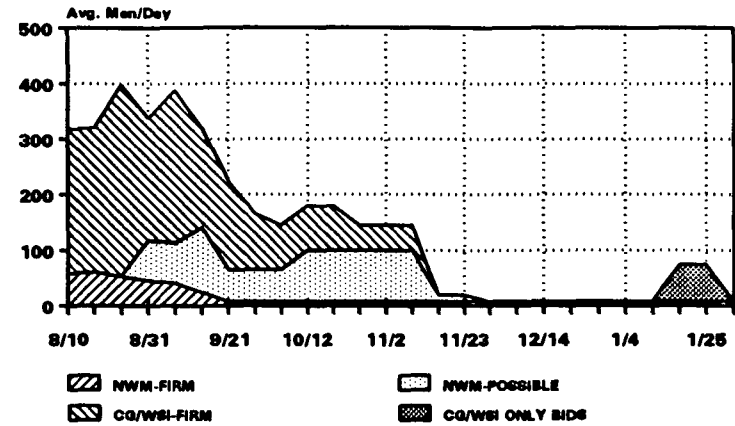
POP PROJECTED MANNING



TOTAL

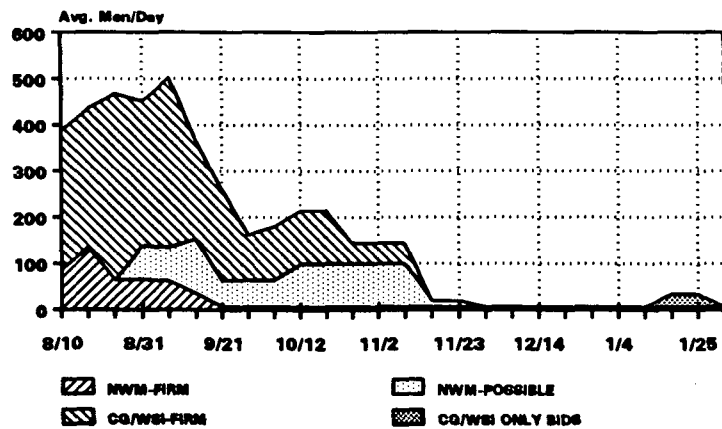


MACHINISTS

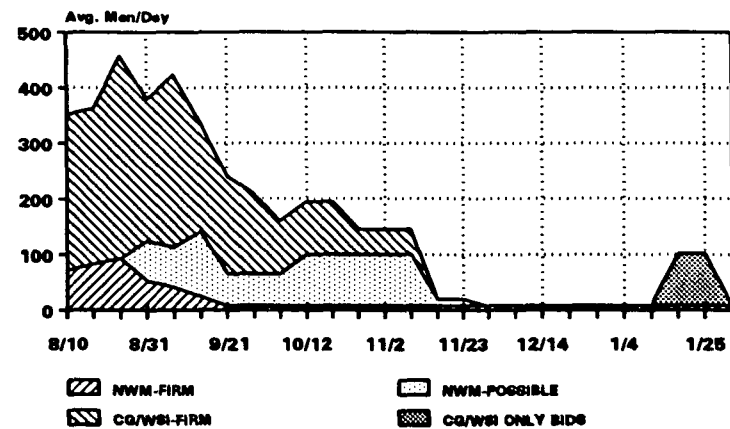


POP MANPOWER PROJECTION

BOILERMAKERS

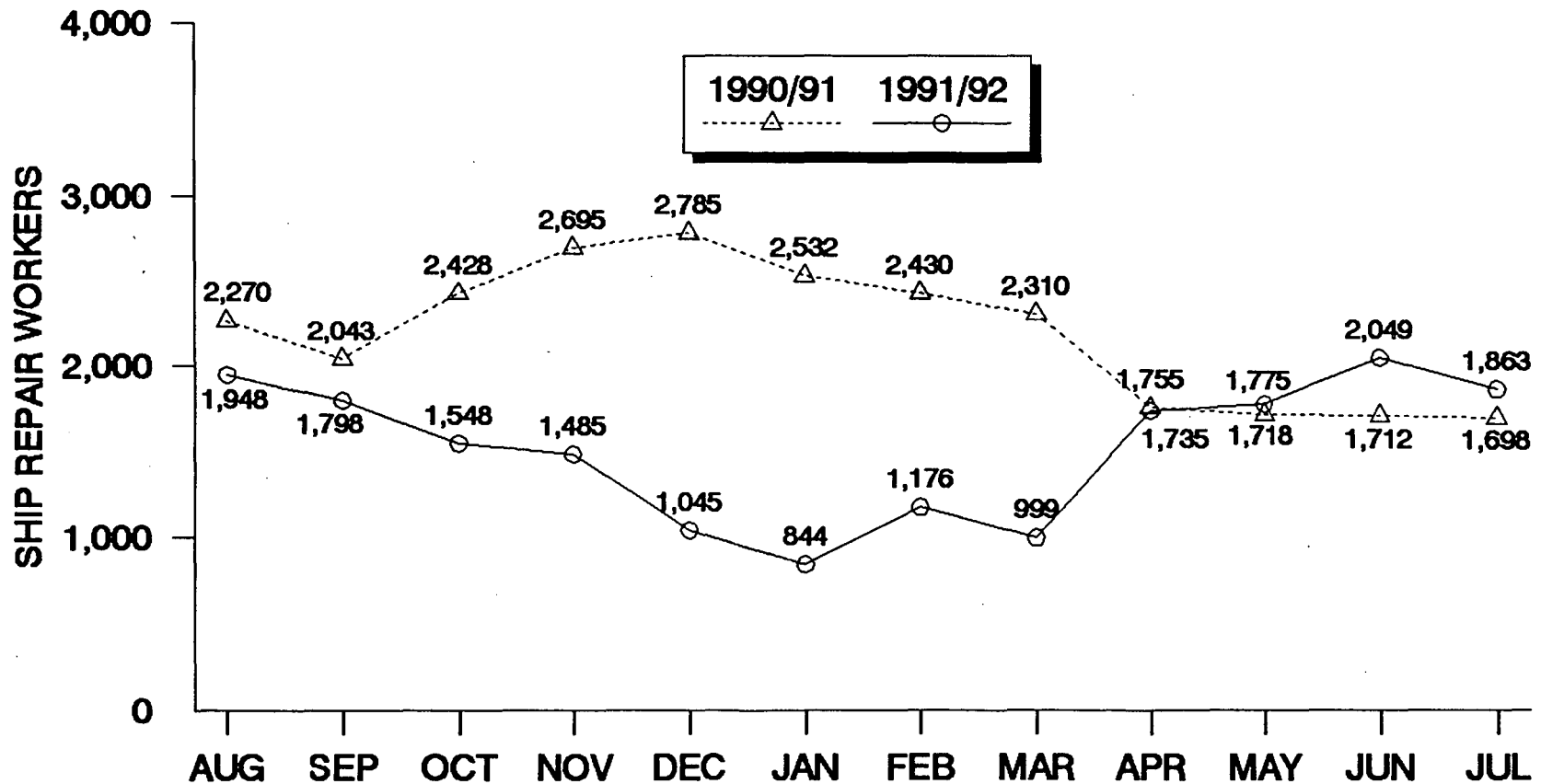


PIPEFITTERS



PSRY PERFORMANCE

SHIP REPAIR WORKERS



NW MARINE WAS CLOSED 12/21/91 THROUGH 1/6/92

PORT OF PORTLAND DRY DOCK AND BERTHAGE SCHEDULE

TOTAL SPACE AVAILABLE IN TREATMENT PLANT: 45,000

DATE: 8/07/92

VESSEL CONT. DATE IN DATE OUT ORD'D BY LOA BEAM TONS

BERTH 301 (830')

| | | | | | | | | |
|---|--------------|-----|-----------|-----------|----------|-----|-----|-------|
| # | SIERRA MADRA | WSI | 20-Aug-92 | 11-Sep-92 | WILLIAMS | 659 | 100 | 60385 |
|---|--------------|-----|-----------|-----------|----------|-----|-----|-------|

BERTH 302/303 (700')

| | | | | | | | | |
|--|------------------|-----|-----------|-----------|--------|-----|----|-------|
| | RIVERHEAD SPIRIT | NWM | 09-Aug-92 | 02-Sep-92 | NUGENT | 660 | 90 | 20572 |
|--|------------------|-----|-----------|-----------|--------|-----|----|-------|

BERTH 304 (700')

| | | | | | | | | |
|--|------------------------|-----|-----------|-----------|-----------|-----|----|-------|
| | USNS SEALIFT CHINA SEA | CG | 01-Jul-92 | 25-Aug-92 | DONALDSON | 587 | 84 | 17157 |
| | CORNUCOPIA | NWM | 26-Aug-92 | 18-Sep-92 | NUGENT | 628 | 90 | 21688 |

| | | | | | | | | |
|-----|-----------------|-----|-----------|-----------|--------|-----|----|-------|
| BID | EXXON GALVESTON | NWM | 28-Sep-92 | 08-Oct-92 | NUGENT | 560 | 95 | 12769 |
| BID | EXXON JAMESTOWN | NWM | 12-Oct-92 | 15-Oct-92 | NUGENT | 715 | 93 | 19733 |
| BID | EXXON JAMESTOWN | NWM | 31-Oct-92 | 11-Nov-92 | NUGENT | 715 | 93 | 19733 |

BERTH 305 (700')

| | | | | | | | | |
|-----|--------------|-----|-----------|-----------|-----------|-----|-----|-------|
| BID | USS ORISKANY | POP | INDEF. | INDEF. | TWINE | 899 | 212 | --- |
| | CAPE BORDA | CG | 20-Jul-92 | 08-Sep-92 | DONALDSON | 540 | 76 | 10723 |
| | CAPE BORDA | CG | 11-Sep-92 | 17-Sep-92 | DONALDSON | 540 | 76 | 10723 |

BERTH 306, 307 & 308 (1,500)

| | | | | | | | | |
|-----|--------------|-----|--------|--------|-------|-----|-----|-----|
| BID | USS ORISKANY | POP | INDEF. | INDEF. | TWINE | 899 | 212 | --- |
|-----|--------------|-----|--------|--------|-------|-----|-----|-----|

BERTH 309 (1,000')

| | | | | | | | | |
|---|------------------------|----|-----------|-----------|-----------|-----|----|-------|
| # | KAWISHIWI | CG | 12-Aug-92 | 24-Aug-92 | DONALDSON | 656 | 86 | 19553 |
| | USNS SEALIFT CHINA SEA | CG | 25-Aug-92 | 04-Sep-92 | DONALDSON | 587 | 84 | 17157 |
| | KAWISHIWI | CG | 04-Sep-92 | 11-Sep-92 | DONALDSON | 656 | 86 | 19553 |

INDICATES NEW ADDITION OR CHANGE SINCE LAST ISSUE OF SCHEDULE
 BID SHADED SECTION INDICATES JOBS NOT YET CONFIRMED

PORT OF PORTLAND DRY DOCK AND BERTHAGE SCHEDULE

TOTAL SPACE AVAILABLE IN TREATMENT PLANT: 45,000

DATE: 8/07/92

VESSEL CONT. DATE IN DATE OUT ORD'D BY LOA BEAM TONS

BERTH 310 (370')

NOTHING SCHEDULED

BERTH 311 (1,100')

NOTHING SCHEDULED

BERTH 312 (1,000')

| | | | | | | | | |
|---|-----------------|-----|-----------|-----------|----------|-----|-----|-------|
| | OVERSEAS JOYCE | WSI | 27-Aug-92 | 30-Aug-92 | WILLIAMS | 626 | 106 | 48017 |
| # | KEYSTONE CANYON | WSI | 02-Sep-92 | 14-Sep-92 | WILLIAMS | 856 | 173 | 81776 |
| | DRYDOCK NO. 4 | POP | 26-Nov-92 | 04-Jan-93 | TWINE | --- | --- | --- |

BERTH 313 (1,000')

| | | | | | | | | |
|--|-------------------|-----|-----------|-----------|----------|-----|-----|-------|
| | CRANE 15 PAINTING | POP | 22-Jul-92 | 02-Sep-92 | TWINE | -- | -- | -- |
| | BROOKS RANGE | WSI | 01-Aug-92 | 12-Sep-92 | WILLIAMS | 906 | 173 | 74250 |
| | KEYSTONE CANYON | WSI | 25-Sep-92 | 26-Oct-92 | WILLIAMS | 856 | 173 | 81776 |

| | | | | | | | | |
|-----|-----------|-----|-----------|-----------|----------|-----|----|-------|
| BID | SOUTHWARD | WSI | 23-Jan-93 | 01-Feb-93 | WILLIAMS | 538 | 75 | 16607 |
|-----|-----------|-----|-----------|-----------|----------|-----|----|-------|

INDICATES NEW ADDITION OR CHANGE SINCE LAST ISSUE OF SCHEDULE
 BID SHADED SECTION INDICATES JOBS NOT YET CONFIRMED

NWMAR130783

PORT OF PORTLAND DRY DOCK AND BERTHAGE SCHEDULE

TOTAL SPACE AVAILABLE IN TREATMENT PLANT: 45,000

DATE: 8/07/92

VESSEL CONT. DATE IN DATE OUT ORD'D BY LOA BEAM TONS

BERTH 314 (1,000')

| | | | | | | | | |
|---|---------------------|-----|-----------|-----------|----------|-----|-----|-------|
| | ARCO ANCHORAGE | WSI | 05-Aug-92 | 10-Aug-92 | WILLIAMS | 883 | 138 | 57691 |
| | ARCO ANCHORAGE | WSI | 16-Aug-92 | 26-Aug-92 | WILLIAMS | 883 | 138 | 57691 |
| # | OVERSEAS WASHINGTON | WSI | 05-Sep-92 | 07-Sep-92 | WILLIAMS | 894 | 106 | 44906 |
| # | OVERSEAS WASHINGTON | WSI | 13-Sep-92 | 30-Sep-92 | WILLIAMS | 894 | 106 | 44906 |
| | CHEVRON MISSISSIPPI | WSI | 05-Oct-92 | 19-Oct-92 | WILLIAMS | 810 | 105 | 35589 |
| | CHEVRON MISSISSIPPI | WSI | 25-Oct-92 | 13-Nov-92 | WILLIAMS | 810 | 105 | 35589 |

BERTH 315 (1,100')

| | | | | | | | | |
|--|---------------|-----|-----------|--------|-------|------|-----|--------|
| | WILLIAMSBURGH | POP | 27-Jun-86 | INDEF. | TWINE | 1095 | 144 | 103812 |
| | BAY RIDGE | CG | 14-Feb-90 | INDEF. | JONES | 1099 | 144 | 103812 |

VESSELS DROPPED FROM SCHEDULE:

VESSEL

INDICATES NEW ADDITION OR CHANGE SINCE LAST ISSUE OF SCHEDULE
 BID SHADED SECTION INDICATES JOBS NOT YET CONFIRMED



August 6, 1992

Serial No. 4750.014

Exxon Shipping Company
P.O. Box 1512
Houston, Texas 77251-1512

Attention: Mr. M. T. English, Repair Coordination Head

Gentleman:

Northwest Marine (NWM) is pleased to have redelivered the Exxon North Slope on July 23, 1992. The Exxon Port Engineer and NWM have agreed to a current contract value of \$4,317,860. At this time there still exist a few outstanding issues. The intent of this letter is to briefly list those outstanding issues for resolution at your convenience.

1. In reference to the noted steel repair changes, NWM has reserved their rights to negotiate certain additional cost related to the accomplishment of the fracture repairs. Compensation was intended to be of a lump sum value type. The Owner agrees that some value is attached to these elements. These issues were discussed at length by Fred Thompson (NWM) & Ed Eckelhoff (NWM) with Bob Tompkins (ESC), and Halim Jamil (ESC).

Item's reserved include:

| | |
|-------------|-----------|
| 157-D | F.O. #138 |
| 157-P/R/S/T | F.O. #140 |
| 157-M/N/O | F.O. #125 |
| 157-Q | F.O. #138 |
| 157-U | F.O. #154 |
| 176-A | F.O. #105 |

NWM's reservations include:

- Acceleration and/or premium time actually expended or required to accomplish the fracture work.
 - Mobilization of additional staging, transporting it to the ship and rigging it on board.
 - Rigging staging off the ship, transporting it back to the yard and stowing.
 - Additional firewatches required above the basic unit price requirements.
- The above mentioned reservations amount to - \$25,000

2. Compensation requested for necessary and appropriate overtime due to difference in bid and actual performance period. - \$177,594
 - A. July 3, 1992 premium time compensation - ref memo dtd. 7/23/92. (128,946)
 - B. Extra premium time day - ref. Memo dtd. 7/23/92 (\$48,648)
3. NWM interprets our performance on the contract as qualifying for the allowable bonus in full. Full bonus compensation amounts to: - \$150,000
4. Additional manning & associated disruption cost to accommodate growth.
 - . Acceleration, and disruption rights were reserved by G.Newell and B. Tompkins pertaining to the ltr. serialized as 4750.011 & dtd. 7/23/92. - \$194,780

5. Fitness For Duty Cost

The following information gives a total account of cost related to the Fitness for Duty program:

Cost of Computer Software and Hardware: This includes the cost of the PC's, server units, software, and initial PFI Inc. contract fees. This item reflects no labor.

| | AMOUNT |
|-----------|----------|
| Hardware: | \$87,886 |

Wiring Costs: Includes cost of labor and materials to wire the network PC's and server units. Labor is limited to subcontractor assistance.

| | AMOUNT |
|-----------------|---------|
| Labor: | \$748 |
| Subcontractors: | \$4,265 |
| Total: | \$5,013 |

Building Modification Costs: Labor and material costs for shelving, cabinets, and structural modifications to testing areas.

| | AMOUNT |
|------------|----------|
| Labor: | \$10,880 |
| Materials: | \$2,545 |
| Other: | \$ 828 |
| Total: | \$14,253 |

PFI Training Costs: Costs of seminars and labor to train NWM trainers and administrators.

| | AMOUNT |
|--------|---------|
| Labor: | \$7,480 |
| Other: | \$5,905 |
| Total: | \$8,285 |

Establish Employee Baseline: A direct charge for each employee to activate their Factor 1000 program.

| | AMOUNT | HOURS |
|--------|-----------|-------|
| Labor: | \$212,874 | 6,261 |
| Other: | \$ 313 | |
| Total: | \$213,187 | |

Based on the above information the hard costs and implementation costs total to equal \$328,624

SUMMARY

| | |
|-------------|-----------|
| SECTION 1 : | \$25,000 |
| SECTION 2 : | \$177,594 |
| SECTION 3 : | \$150,000 |
| SECTION 4 : | \$194,780 |
| SECTION 5 : | \$328,624 |
| | ===== |
| | \$875,998 |

We are eager to complete all outstanding negotiations to successfully close-out this project. As discussed in our phone conversation earlier this week, we are prepared to meet with you at your earliest convenience to discuss and resolve these outstanding issues. Please let me know of the appropriate time and arrangements.

Very truly yours,

Donald Nugent

Donald E. Nugent
Operations Manger

Dry Dock and Berthage Schedule



PORT OF PORTLAND DRY DOCK AND BERTHAGE SCHEDULE

TOTAL SPACE AVAILABLE IN TREATMENT PLANT: 52,000

DATE: 4/03/92

VESSEL CONT. DATE IN DATE OUT ORD'D BY LOA BEAM TONS

DRY DOCK #1 (598')

| | | | | | | | | |
|--|-----------|-----|-----------|-----------|--------|-----|----|------|
| | MALASPINA | NWM | 30-Mar-92 | 11-Apr-92 | NUGENT | 371 | 74 | 2928 |
|--|-----------|-----|-----------|-----------|--------|-----|----|------|

DRY DOCK #3 (661')

| | | | | | | | | |
|--|-----------------------|-----|-----------|-----------|----------|-----|----|-------|
| | CURY | WSI | 30-Mar-92 | 08-Apr-92 | WILLIAMS | 560 | 85 | 18268 |
| | POLAR STAR | WSI | 26-Apr-92 | 17-May-92 | WILLIAMS | 399 | 84 | --- |
| | OVERSEAS PHILADELPHIA | WSI | 25-May-92 | 30-May-92 | WILLIAMS | 658 | 90 | 21446 |
| | POLAR STAR | WSI | 02-Jun-92 | 05-Jul-92 | WILLIAMS | 399 | 84 | --- |

| | | | | | | | | |
|------|--------------------|-----|-----------|-----------|-----------|-----|----|-------|
| BID# | USCGC RESOLUTE | CG | 09-Apr-92 | 10-Apr-92 | DONALDSON | 210 | 34 | --- |
| BID# | SEALIFT ANTARCTIC | CG | 13-Apr-92 | 25-Apr-92 | DONALDSON | 587 | 84 | 17157 |
| BID | LION OF CALIFORNIA | WSI | 20-Apr-92 | 26-Apr-92 | WILLIAMS | 515 | 69 | 10473 |

DRY DOCK #4 (982')

| | | | | | | | | |
|---|------------------|-----|-----------|-----------|-----------|-----|-----|-------|
| | GLOBAL SENTINAL | CG | 26-Mar-92 | 12-Apr-92 | DONALDSON | 479 | 71 | 13201 |
| # | OVERSEAS CHICAGO | CG | 13-Apr-92 | 19-Apr-92 | DONALDSON | 894 | 106 | 44869 |
| # | THOMPSON PASS | WSI | 20-Apr-92 | 03-May-92 | WILLIAMS | 906 | 173 | 74250 |
| # | ATIGUN PASS | WSI | 09-May-92 | 12-May-92 | WILLIAMS | 906 | 173 | 74250 |
| | NIEUW AMSTERDAM | CG | 13-May-92 | 19-May-92 | DONALDSON | 705 | 89 | 33930 |
| # | ATIGUN PASS | WSI | 20-May-92 | 27-May-92 | WILLIAMS | 906 | 173 | 74250 |
| | PATHFINDER II | CG | 28-May-92 | 02-Jun-92 | DONALDSON | 686 | 106 | 34353 |
| | TONSINA | CG | 03-Jun-92 | 18-Jun-92 | DONALDSON | 869 | 137 | 60384 |
| | PROSPECTOR II | CG | 27-Jun-92 | 01-Jul-92 | DONALDSON | 686 | 106 | 34353 |
| | BROOKS RANGE | WSI | 02-Jul-92 | 15-Jul-92 | WILLIAMS | 906 | 173 | 74250 |
| | KEYSTONE CANYON | WSI | 10-Aug-92 | 23-Aug-92 | WILLIAMS | 856 | 173 | 81776 |

INDICATES NEW ADDITION OR CHANGE SINCE LAST ISSUE OF SCHEDULE
 BID SHADED SECTION INDICATES JOBS NOT YET CONFIRMED

NWMAR130790

PORT OF PORTLAND DRY DOCK AND BERTHAGE SCHEDULE

TOTAL SPACE AVAILABLE IN TREATMENT PLANT: 52,000

DATE: 4/03/92

VESSEL CONT. DATE IN DATE OUT ORD'D BY LOA BEAM TONS

DRY DOCK #4 (982')

| | | | | | | | | |
|------|-------------------|-----|-----------|-----------|-----------|------|-----|--------|
| BID | ARCO ALASKA | CG | 20-May-92 | 26-May-92 | DONALDSON | 953 | 166 | 83675 |
| BID | EXXON NORTH SLOPE | CG | 17-Jun-92 | 26-Jun-92 | DONALDSON | 906 | 173 | 75272 |
| BID# | CAPE GIBSON | CG | 19-Jun-92 | 25-Jun-92 | DONALDSON | 605 | 82 | 18949 |
| BID | ARCO ANCHORAGE | CG | 06-Jul-92 | 21-Jul-92 | DONALDSON | 883 | 138 | 57691 |
| BID# | CAPE GIRARDEAU | CG | 16-Jul-92 | 22-Jul-92 | DONALDSON | 605 | 82 | 18949 |
| BID | ARCO INDEPENDENCE | CG | 14-Sep-92 | 20-Sep-92 | DONALDSON | 1100 | 178 | 117515 |
| BID | WESTERDAM | WSI | 28-Sep-92 | 04-Oct-92 | WILLIAMS | 670 | 95 | 42092 |
| BID | WESTERDAM | CG | 28-Sep-92 | 04-Oct-92 | DONALDSON | 670 | 95 | 42092 |

BERTH 301 (830')

| | | | | | | | | |
|------|-------------------|-----|-----------|-----------|-----------|-----|----|-------|
| # | CHARLES L. BROWN | CG | 14-Mar-92 | 03-Apr-92 | DONALDSON | 340 | 42 | 2834 |
| # | MALASPINA | NWM | 11-Apr-92 | 15-Apr-92 | NUGENT | 371 | 74 | 2928 |
| BID# | SEALIFT ANTARCTIC | CG | 12-Apr-92 | 13-Apr-92 | DONALDSON | 587 | 84 | 17157 |
| BID# | SEALIFT ANTARCTIC | CG | 25-Apr-92 | 25-May-92 | DONALDSON | 587 | 84 | 17157 |

BERTH 302/303 (700')

| | | | | | | | | |
|-----|--------------------|-----|-----------|-----------|-----------|-----|----|-------|
| | USNS ASSURANCE | CG | 23-Mar-92 | 10-Apr-92 | DONALDSON | 224 | 43 | 1486 |
| | CORNUCOPIA | NWM | 30-Mar-92 | 03-Apr-92 | NUGENT | 628 | 90 | 21688 |
| | POLAR STAR | WSI | 20-Apr-92 | 26-Apr-92 | WILLIAMS | 399 | 84 | --- |
| | POLAR STAR | WSI | 17-May-92 | 02-Jun-92 | WILLIAMS | 399 | 84 | --- |
| | POLAR STAR | WSI | 05-Jul-92 | 10-Jul-92 | WILLIAMS | 399 | 84 | --- |
| BID | LION OF CALIFORNIA | WSI | 15-Apr-92 | 20-Apr-92 | WILLIAMS | 515 | 69 | 10473 |
| BID | LION OF CALIFORNIA | WSI | 26-Apr-92 | 15-May-92 | WILLIAMS | 515 | 69 | 10473 |

BERTH 304 (700')

| | | | | | | | | |
|---|-----------------------|-----|-----------|-----------|----------|-----|----|-------|
| # | CURY | WSI | 08-Apr-92 | 20-Apr-92 | WILLIAMS | 560 | 85 | 18268 |
| | OVERSEAS PHILADELPHIA | WSI | 15-May-92 | 25-May-92 | WILLIAMS | 658 | 90 | 21446 |
| | OVERSEAS PHILADELPHIA | WSI | 30-May-92 | 10-Jun-92 | WILLIAMS | 658 | 90 | 21446 |

INDICATES NEW ADDITION OR CHANGE SINCE LAST ISSUE OF SCHEDULE

BID SHADED SECTION INDICATES JOBS NOT YET CONFIRMED

PORT OF PORTLAND DRY DOCK AND BERTHAGE SCHEDULE

TOTAL SPACE AVAILABLE IN TREATMENT PLANT: 52,000

DATE: 4/03/92

VESSEL CONT. DATE IN DATE OUT ORD'D BY LOA BEAM TONS

BERTH 304 (700')

| | | | | | | | | |
|-----|--------------|-----|-----------|-----------|--------|-----|-----|-------|
| BID | COAST RANGE | NWM | 13-Jul-92 | 31-Jul-92 | NUGENT | 659 | 100 | 21357 |
| BID | SIERRA MADRA | NWM | 10-Aug-92 | 28-Aug-92 | NUGENT | 659 | 100 | 60385 |

BERTH 305 (700')

| | | | | | | | | |
|------|--------------------|-----|-----------|-----------|-----------|-----|-----|-------|
| | GRAND CANYON STATE | CG | 19-Mar-92 | 30-Apr-92 | DONALDSON | 669 | 76 | 17137 |
| BID# | SANSINENA II | NWM | 01-Jun-92 | 20-Jun-92 | NUGENT | 810 | 105 | 35633 |
| BID | CORNUCOPIA | NWM | 03-Aug-92 | 28-Aug-92 | NUGENT | 628 | 90 | 21688 |

BERTH 306, 307 & 308 (1,500)

| | | | | | | | | |
|--|-------------|-----|-----------|-----------|----------|-----|----|-------|
| | CAPE BRETON | WSI | 19-Mar-92 | 09-Apr-92 | WILLIAMS | 540 | 76 | 10723 |
|--|-------------|-----|-----------|-----------|----------|-----|----|-------|

BERTH 309 (1,000')

| | | | | | | | | |
|------|----------------|-----|-----------|-----------|-----------|-----|----|-------|
| | BERTH REPAIRS | POP | 19-Feb-92 | 30-Jun-92 | TWINE | -- | -- | -- |
| BID# | CAPE GIBSON | CG | 01-Jun-92 | 16-Jul-92 | DONALDSON | 605 | 82 | 18949 |
| BID# | CAPE GIRARDEAU | CG | 01-Jun-92 | 16-Jul-92 | DONALDSON | 605 | 82 | 18949 |
| BID# | CAPE GIBSON | CG | 25-Jun-92 | 04-Nov-92 | DONALDSON | 605 | 82 | 18949 |
| BID# | CAPE GIRARDEAU | CG | 33-Jul-92 | 04-Nov-92 | DONALDSON | 605 | 82 | 18949 |

BERTH 310 (370')

| | | | | | | | | |
|--|-------------------|--|--|--|--|--|--|--|
| | NOTHING SCHEDULED | | | | | | | |
|--|-------------------|--|--|--|--|--|--|--|

BERTH 311 (1,100')

| | | | | | | | | |
|--|------------|-----|-----------|--------|-------|-----|----|-------|
| | CAPE BORDA | POP | 20-Feb-92 | INDEF. | TWINE | 540 | 76 | 10723 |
| | CAPE BOVER | POP | 19-Mar-92 | INDEF. | TWINE | 540 | 76 | 10723 |

INDICATES NEW ADDITION OR CHANGE SINCE LAST ISSUE OF SCHEDULE
 BID SHADED SECTION INDICATES JOBS NOT YET CONFIRMED

PORT OF PORTLAND DRY DOCK AND BERTHAGE SCHEDULE

TOTAL SPACE AVAILABLE IN TREATMENT PLANT: 52,000

DATE: 4/03/92

VESSEL CONT. DATE IN DATE OUT ORD'D BY LOA BEAM TONS

BERTH 312 (1,000')

| | | | | | | | | |
|------|---------------------|-----|-----------|-----------|-----------|-----|-----|-------|
| | CHEVRON MISSISSIPPI | WSI | 11-Apr-92 | 27-Apr-92 | WILLIAMS | 810 | 105 | 35589 |
| BID# | EXXON NORTH SLOPE | CG | 06-Jun-92 | 17-Jun-92 | DONALDSON | 906 | 173 | 75272 |
| BID# | EXXON NORTH SLOPE | CG | 26-Jun-92 | 15-Jul-92 | DONALDSON | 906 | 173 | 75272 |

BERTH 313 (1,000')

| | | | | | | | | |
|---|-----------------|-----|-----------|-----------|----------|-----|-----|-------|
| | THOMPSON PASS | WSI | 27-Mar-92 | 20-Apr-92 | WILLIAMS | 906 | 173 | 74251 |
| | THOMPSON PASS | WSI | 03-May-92 | 05-May-92 | WILLIAMS | 906 | 173 | 74251 |
| # | ATIGUN PASS | WSI | 12-May-92 | 20-May-92 | WILLIAMS | 906 | 173 | 74250 |
| # | ATIGUN PASS | WSI | 27-May-92 | 12-Jun-92 | WILLIAMS | 906 | 173 | 74250 |
| # | BROOKS RANGE | WSI | 15-Jun-92 | 02-Jul-92 | WILLIAMS | 906 | 173 | 74250 |
| # | BROOKS RANGE | WSI | 15-Jul-92 | 30-Jul-92 | WILLIAMS | 906 | 173 | 74250 |
| | KEYSTONE CANYON | WSI | 01-Aug-92 | 10-Aug-92 | WILLIAMS | 856 | 173 | 81776 |
| | KEYSTONE CANYON | WSI | 23-Aug-92 | 31-Aug-92 | WILLIAMS | 856 | 173 | 81776 |

BERTH 314 (1,000')

| | | | | | | | | |
|-----|-------------------|----|-----------|-----------|-----------|------|-----|--------|
| | OVERSEAS CHICAGO | CG | 27-Mar-92 | 13-Apr-92 | DONALDSON | 894 | 106 | 44869 |
| # | OVERSEAS CHICAGO | CG | 19-Apr-92 | 05-May-92 | DONALDSON | 894 | 106 | 44869 |
| | TONSINA | CG | 22-May-92 | 03-Jun-92 | DONALDSON | 869 | 137 | 60384 |
| | TONSINA | CG | 18-Jun-92 | 01-Jul-92 | DONALDSON | 869 | 137 | 60384 |
| BID | SEALIFT CHINA SEA | CG | 15-Apr-92 | 15-Jun-92 | DONALDSON | 587 | 84 | 17134 |
| BID | ARCO ALASKA | CG | 26-May-92 | 05-Jun-92 | DONALDSON | 953 | 166 | 83675 |
| BID | ARCO ANCHORAGE | CG | 11-Jul-92 | 21-Jul-92 | DONALDSON | 883 | 138 | 57691 |
| BID | ARCO INDEPENDENCE | CG | 20-Sep-92 | 30-Sep-92 | DONALDSON | 1100 | 178 | 117515 |

BERTH 315 (1,100')

| | | | | | | | | |
|--|---------------|-----|-----------|--------|-------|------|-----|--------|
| | WILLIAMSBURGH | POP | 27-Jun-86 | INDEF. | TWINE | 1095 | 144 | 103812 |
| | BAY RIDGE | CG | 14-Feb-90 | INDEF. | JONES | 1099 | 144 | 103812 |

VESSELS DROPPED FROM SCHEDULE:

VESSEL

S/S EXXON BENICIA
LESSONS LEARNED

SHIP: S/S EXXON BENICIA
AVAILABILITY DATES: 8 March 1991 to 21 April 1991
CONTRACT TIME: 40 Calendar Days
PROJECT MANAGER: Mike Luzinski
CAM: Hardy Scroggin
LEAD SHIP SUPT; Bill Lundmark

REPAIR SUPT. FOR EXXON: Bob Tompkins

PROBLEM

Start up specs were edited prior to craft distribution. (Hold items and hold paragraphs were not included) This proved to pose a problem with add on foreman understanding potential scope of work item.

SOLUTION

Distribute entire spec at start-up. However, CAM and Lead Ship Superintendent to stamp hold items "HOLD UNTIL AUTHORIZED" as part of the craft mark-up process.

PROBLEM

Ships crew removing lagging and insulation after arrival without regard for asbestos control procedures.

SOLUTION

Estimating to include a lagging removal caution statement in all future bids.

Production Department to reiterate NWM policy at all pre-arrival meetings with Owner's Representative.

PROBLEM

Steel fractures not identified prior to ships arrival. Disrupts all efforts to plan in advance!

SOLUTION

Estimating/CAM/Lead Ship Superintendent to press Owner's Representative for all possible info early. Ongoing problem with no easy solution.

PROBLEM

Assist hours provided by NWM to Subcontractors consistently exceed bid.

S/S EXXON BENICIA

Lessons Learned

Page two (2)

SOLUTION

Estimating Department to review Subcontractor quotes more closely for services requested. Also, future bids to contain qualifying statements outlining what NWM Subcontractor assistance will be provided.

PROBLEM

Recalls and new hires brought in on the back shifts not receiving full service processing by night medical personnel.

SOLUTION

Crafts to attempt to recall/hire back shift personnel in advance of need date. Medical Department to increase staff during peak hiring periods.

PROBLEM

Insufficient amount of radios available to equip necessary work force.

SOLUTION

Production to establish priorities for crafts needs prior to vessel arrival. More radios should be available after M/V VIKING SERENADE.

PROBLEM

No set policy concerning labor charges to set-up or restore equipment. Should your account be charged or the job equipment was used on.

SOLUTION

Perrino to publish policy.

PROBLEM

Back shift Superintendents changing craft priorities. Causes frustration and confusion, loss of manhours.

SOLUTION

Night Superintendents to use more caution and discretion when changing direction given on turnovers.

S/S EXXON BENICIA
Lessons Learned
Page three (3)

PROBLEM

Skill and knowledge level of journeymen dispatched from union halls unsat.

SOLUTION

Production/Personnel Departments working on craft entry test for all journeymen hired. Personnel Department working with unions on membership training.

PROBLEM

New and growth work put out to crafts without proper charge number assigned causes labor and material mischarges and rework for craft clerks and payroll.

SOLUTION

CAMS and Ship Superintendents to make extra effort to assign charge number prior to publishing work item. Crafts are to request number, if omitted, before starting work.

PROBLEM

Tools requested by crafts prior to ship arrival were not made available nor quantities provided sufficient.

SOLUTION

Tool Room Supervisor to: 1) Notify requesting craft of tool shortage. 2) Tool Room Supervisor to discuss shortage with Production Manager. 3) Decision to purchase, rent or borrow from other divisions will be made.

PROBLEM

Production GANTT Schedules not completely accurate after start of job. Excellent planning tool prior to arrival.

SOLUTION

Provide resource to update schedules daily.

PROBLEM

SIPCO control in areas of scaffolding, response time, assist required, safety and environmental issues needs to be reviewed by upper management (NWM).

S/S EXXON BENICIA
Lessons Learned
Page four (4)

SOLUTION

Estimating - CAMS - Production to continue tightening subcontrol.
Ongoing effort.

PROBLEM

Regulatory Body call outs for inspections needs to be controlled by one point of contact. There is alot of double effort and miscommunication in this area.

SOLUTION

Possible Q.A. function, designated craft or Ship Superintendent.

PROBLEM

A certain amount of the new equipment installation specs were vague and ambiguous pertaining to material requirements and equipment location. Owner's Representative was not available during the planning phase to assist.

Possibly a shipcheck would have helped.

SOLUTION

Estimating and Production Departments to evaluate need for ship checks and types of personnel needed for a comprehensive spec. review.

CAUTION: Cost of shipcheck should be paid back at least two (2) fold in production efficiency to be worth while.

PROBLEM

Out of town Ship Superintendents were at a great disadvantage during start up because of unfamiliarity with Portland Shipyard and with craft foremen.

SOLUTION

Every attempt to be made in the future to have out of town Ship Superintendents brought in during the planning phase or before if possible.

PROBLEM

Selected crafts experienced in-house problems obtaining manpower when budgets ran short. Caused unnecessary frustration.

S/S EXXON BENICIA
Lessons Learned
Page five (5)

SOLUTION

Budget is a managing tool, a goal, not the sole drive in accomplishing a project.

POSITIVE COMMENTS

- o Advance planning time was a good investment.
- o Start up was smooth and productive. Little wasted motion.
- o Supervision numbers adequate for work scope and manning. Supervision very professional.
- o Customer received a quality product on time.
- o Management tools were kept very current and accurate. Upper management was very comfortable with info provided.
- o Cost of service maintenance crafts was easily recognized because of separate charge item.

EXXON SHIPPING COMPANY

POST OFFICE BOX 1512 • HOUSTON, TEXAS 77251-1512 "EXXSHIP HOUSTON"

D. J. PAUL
FLEET SERVICES MANAGER

February 1, 1991

EXXON BENICIA
Agreement & Specification

Mr. William H. Zavin, II
Northwest Marine Iron Works
5555 N. Channel Avenue, Bldg. 2
Portland, Oregon 97217

Dear Sir:

Regarding our solicitation for bids on December 7, 1990 and your tender dated January 15, 1991, we wish to congratulate you on being the successful bidder and being awarded the EXXON BENICIA.

In order to comply with the terms of the bid you must sign and witness two (2) copies of the Agreement being sent under separate cover and return them to us for countersigning prior to the arrival of the vessel at your shipyard.

Presently the EXXON BENICIA is due in the shipyard on or about February 25, 1991. The Repair Superintendent on the vessel will be Bob Tompkins. If you have any questions regarding the specification do not hesitate to contact him at (707) 745-7493.

Very truly yours,



H. P. Leyendecker
Repair Coordinator

HPL:lc

5854b

cc: Mr. D. J. Paul
Mr. E. C. Hess
Mr. D. H. Koops
Capt. J. J. Buono
Mr. R. G. Tompkins



NWMAR130799



EXXON SHIPPING COMPANY

POST OFFICE BOX 1512 • HOUSTON, TEXAS 77251-1512 "EXXSHIP HOUSTON"

J. A. TOMPKINS
OCEAN FLEET SERVICES MANAGER

July 26, 1990

EXXON BENICIA
Agreement & Specification

Mr. William H. Zavin, II
Northwest Marine Iron Works
5555 N. Channel Avenue, Bldg. 2
Portland, Oregon 97217

Dear Sir:

Enclosed, please find a proposed Agreement and Specification which cover repairs and alterations to the EXXON BENICIA, for which we are soliciting bids under the following conditions and those conditions stipulated in the attached Agreement and Specification. The vessel is presently scheduled to enter the successful bidder's yard on or about August 17, 1990.

- 1) All bids must specify the time required, in consecutive calendar days, to complete the repairs, renewals, and alterations (the "work") set forth in the specification enclosed herewith, together with itemized fixed rates for applicable insurance premiums and all services required by the Contractor in performing the work pursuant to said specification. Consecutive calendar days will include Saturdays, Sundays, and holidays. The bid must include prices for each item and each part of the item. Exceptions to the bid must be clearly noted in your bid response.
- 2) A flow chart must be submitted which will show the work schedule for the major items, especially those which influence the total repair time. This will assist Exxon in assessing if certain items should be canceled or modified in order to reduce the total repair time.
- 3) Bids should be addressed and delivered to Exxon Shipping Company, P. O. Box 1512, Houston, Texas 77251, Attention: Mr. H. P. Leyendecker. In order to be considered, your bid must be received in the office of Mr. Leyendecker, in Room 3407, 800 Bell, Houston, Texas 77002 not later than 10:00 am CST, July 31, 1990, and if an acceptable bid is submitted, such bidder will be notified and written confirmation will be mailed promptly to such successful bidder. Such bids must be submitted in the following form:

Mr. William H. Zavin, II

Page 2

July 26, 1990

"I (or we), hereby agree to faithfully carry out and complete all the repairs, renewals, alterations, replacements and/or conversions ("work") to the EXXON BENICIA in ___ consecutive calendar days, as set forth in the Agreement and Specification submitted with your letter dated July 26, 1990, and to abide by all the conditions expressed therein.

In the event our bid is accepted, said Agreement and Specification shall constitute a binding Contract between Exxon and the undersigned as Contractor, provided, however, that Exxon reserves the right at any time and at its election, to add or delete any portion or portions of the work, with a corresponding increase or reduction in price and days required for completion. In accordance with Article 4, Item 2 of the Agreement, cost for labor involving additional work which cannot be settled at a fixed price shall be calculated at a composite rate of \$_____ per hour straight time, \$_____ overtime, and \$_____ premium time. Said rates include all overhead, profit and all other amounts payable to Contractor for said labor. Cost of any deletions shall be that cost (or pro rata thereof) stipulated in the Specification as submitted to Exxon by Contractor."

- 4) Exxon is not obligated to accept any bid(s) and specifically reserves the right to reject any and all bids submitted without cause, explanation or liability of any type whatsoever.

If there are any questions concerning the specification, please call me at (713) 656-2835.

Very truly yours,



H. P. Leyendecker
Repair Coordinator

HPL:lc

Attachments

cc: Mr. J. A. Tompkins (w/o att)
Mr. J. T. Gallihugh (w/o att)
Mr. D. H. Koops (w/o att)
Capt. W. J. Deppe
Mr. R. G. Tompkins

bcc: BILL ZAVIN

BILL JOHNSTON

BOB HUBBARD

ALEX VINCK

MATTHEW SPALETA

QUINTIN WATT

GEO RIDDLE + ATTCHD

JIM COLEMAN

[D] 2478b/2479b

NWMAR130801

EXXON SHIPPING COMPANY

POST OFFICE BOX 1512 • HOUSTON, TEXAS 77251-1512 "EXXSHIP HOUSTON"

J. A. TOMPKINS
OCEAN FLEET SERVICES MANAGER

July 24, 1990

EXXON SAN FRANCISCO
Agreement & Specification

Mr. William H. Zavin, II
Northwest Marine Iron Works
5555 N. Channel Avenue, Bldg. 2
Portland, Oregon 97217

Dear Sir:

Enclosed, please find a proposed Agreement and Specification which cover repairs and alterations to the EXXON SAN FRANCISCO, for which we are soliciting bids under the following conditions and those conditions stipulated in the attached Agreement and Specification. The vessel is presently scheduled to enter the successful bidder's yard on or about October 1, 1990.

- 1) All bids must specify the time required, in consecutive calendar days, to complete the repairs, renewals, and alterations (the "work") set forth in the specification enclosed herewith, together with itemized fixed rates for applicable insurance premiums and all services required by the Contractor in performing the work pursuant to said specification. Consecutive calendar days will include Saturdays, Sundays, and holidays. The bid must include prices for each item and each part of the item. Exceptions to the bid must be clearly noted in your bid response.
- 2) Items listed as Part I are to be accurately priced using the enclosed bid format sheets and used in calculating the total repair days. Those items clearly listed as Part II, Part III, etc. are to be accurately priced but are not to be factored in the total repair time since they probably will have no effect on the time, unless some unforeseen problem arises during the repair period. On the other hand, should you feel the items included in Part II, Part III, etc. will, in fact, affect the total repair time, please identify such items and the extent to which the repair period will be increased.
- 3) Exxon is very interested in promoting safety in the shipyard as well as aboard our vessel during the repair period.

NWMAR130802

Part of the bid evaluation will include a review of the shipyard's safety Policy and Program, thus we request a description of your Safety Program and safety record for the past three (3) years be included in your bid proposal.

- 4) A flow chart must be submitted which will show the work schedule for the major items, especially those which influence the total repair time. This will assist Exxon in assessing if certain items should be canceled or modified in order to reduce the total repair time. Those items which can reduce the repair time must be clearly identified in your letter and flow chart. The drydock period must be scheduled so the vessel is off drydock at least seven (7) days prior to the completion of the bid period. All repairs which are necessary to light off the boiler and put the auxiliary plant on the line must be completed at this time. This is in order to allow sufficient time to complete all shipyard and regulatory testing prior to the bid redelivery date.
- 5) Bids should be addressed and delivered to Exxon Shipping Company, P. O. Box 1512, Houston, Texas 77251, Attention: Mr. H. P. Leyendecker. In order to be considered, your bid must be received in the office of Mr. Leyendecker, in Room 3407, 800 Bell, Houston, Texas 77002 not later than 10:00 am CST, August 21, 1990, and if an acceptable bid is submitted, such bidder will be notified and written confirmation will be mailed promptly to such successful bidder. Such bids must be submitted in the following form:

"I (or we), hereby agree to faithfully carry out and complete all the repairs, renewals, alterations, replacements and/or conversions ("work") to the EXXON SAN FRANCISCO in ___ consecutive calendar days including ___ days in the drydock, as set forth in the Agreement and Specification submitted with your letter dated July 24, 1990, and to abide by all the conditions expressed therein.

In the event our bid is accepted, said Agreement and Specification shall constitute a binding Contract between Exxon and the undersigned as Contractor, provided, however, that Exxon reserves the right at any time and at its election, to add or delete any portion or portions of the work, with a corresponding increase or reduction in price and days required for completion. In accordance with Article 4, Item 2 of the Agreement, cost for labor involving additional work which cannot be settled at a fixed price shall be calculated at a composite rate of \$_____ per hour straight time, \$_____ overtime, and \$_____ premium time. Said rates include all overhead, profit and all other amounts payable to Contractor for said labor. Cost of any deletions shall be that cost (or pro rata thereof) stipulated in the Specification as submitted to Exxon by Contractor."

- 6) Exxon is not obligated to accept any bid(s) and specifically reserves the right to reject any and all bids submitted without cause, explanation or liability of any type whatsoever.

1
Mr. William H. Zavin, II
Page 3
July 24, 1990

If anyone wishes to visit the vessel for bid purposes, the schedule is as follows:

San Francisco, California
San Francisco, California

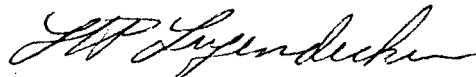
July 31, 1990
August 14, 1990

For scheduling visits and updates on the vessel's ETA contact Stuart McRobbie at (415) 420-7263, or Jack King at (707) 745-7492.

If there are any questions concerning the specification, please call Jack King.

In your bid/response letter advise us of any limitations on drydock availability or price revisions in the event that the above schedule for presenting our vessel changes.

Very truly yours,



H. P. Leyendecker
Repair Coordinator


HPL:lc

Attachments

cc: Mr. J. A. Tompkins (w/o att)
Mr. J. T. Gallihugh (w/o att)
Mr. D. H. Koops (w/o att)
Mr. S. W. McRobbie
Mr. J. H. King

[D] 2363b/2364b

MEMORANDUM

| | |
|--|---|
| TO: MR. H. P. LEYENDECKER | SUBJECT: EXXON BATON ROUGE SHIPYARD REPAIR AT NMIW JUNE-JULY 1989 |
| FROM: S. M. DAY  | DATE: JANUARY 17, 1990 |

AFTER REVIEWING THE IMPACT DOCUMENTATION PROVIDED BY NORTHWEST MARINE IRON WORKS DATED 12/11/89. I OFFER MY COMMENTS AND OBSERVATIONS REGARDING THE REPAIR OF THE EXXON BATON ROUGE.

GENERAL COMMENTS:

EXXON WAS VERY PLEASED WITH THE FINAL OUTCOME OF THE BATON ROUGE REPAIR. BOTH THE CONTRACT INSPECTORS AND I FELT THAT OVERALL, NORTHWEST MARINE MADE AN OUTSTANDING EFFORT TO COMPLETE ALL OF THE WORK IDENTIFIED AS QUICKLY AS POSSIBLE. THERE WERE A FEW ROUGH SPOTS DURING THE COURSE OF THE REPAIR AND SOME WORK WHICH WAS VERY DIFFICULT TO SCHEDULE WITHOUT CONFLICT. HOWEVER, VIRTUALLY ALL OF THE WORK WAS COMPLETED AND THE VESSEL IS NOW IN MUCH BETTER CONDITION THAN WHEN IT ARRIVED AT NMIW.

FIRST, I WOULD LIKE TO COMMENT ON THE SCOPE OF WORK CONTAINED IN THE BID SPECIFICATION COMPARED TO THE VOLUME OF WORK ACTUALLY ACCOMPLISHED. THE TOTAL OF THE ORIGINAL PART I, II, AND III WAS \$4,925,878. THE AGREED TOTAL FOR WORK DONE ON THE BATON ROUGE IS \$3,802,458 AS OF THIS DATE. THIS AMOUNT IS ONLY 4% GREATER THAN THE ORIGINAL PART I BID AMOUNT AND EVEN IF YOUR TOTAL OUTSTANDING CLAIM OF \$479,178 IS ADDED TO THE AGREED TOTAL, THE AMOUNT IS STILL SUBSTANTIALLY LESS THAN THE PART I, II, AND III SUM.

EXXON'S BID LETTER TO NMIW CONTAINED THE FOLLOWING INSTRUCTIONS REGARDING THE CALCULATION OF THE TOTAL REPAIR DAYS: "...SHOULD YOU FEEL THAT THE ITEMS INCLUDED IN PART II, PART III, ETC. WILL, IN FACT AFFECT TOTAL REPAIR TIME, PLEASE IDENTIFY SUCH ITEMS AND THE EXTENT TO WHICH THE REPAIR PERIOD WILL BE INCREASED.". SINCE THE BID CONTAINED NO EXCEPTIONS TO THE PART II AND III WORK, IT WAS OUR CONCLUSION THAT NORTHWEST MARINE WAS CAPABLE OF ACCOMPLISHING ALL OF THE WORK IN THE BID SPECIFICATION IN 22 DAYS. THIS CONCLUSION SHOULD BE KEPT IN MIND AS NMIW IS READING OUR COMMENTS REGARDING THE AMOUNT OF GROWTH IN WORK SCOPE WHICH HAS BEEN CLAIMED.

001 SERVICES

EXXON DOES NOT AGREE THAT THE JOB GROWTH ON THE EXXON BATON ROUGE WAS INORDINATE. THE BID PRICE FOR SERVICES SHOULD HAVE ALLOWED FOR SERVICES TO COVER ALL OF THE WORK, (\$4.9M), CONTAINED IN THE BID SPECIFICATION. NORTHWEST MARINE HAS ALREADY BEEN PAID \$33K FOR FOUR EXTRA DAYS OF SERVICES AND WE ARE STILL NEGOTIATING WITH THEM REGARDING AN ADDITIONAL \$46K FOR THE REMAINING 5 DAYS OF SERVICES PROVIDED THEY WERE IN EXCESS OF THE ORIGINAL 21 DAY REPAIR PERIOD. IT IS EXXON'S POSITION THAT THE FINAL PRICE WHICH WE AGREE UPON FOR FIELD ORDER NUMBER 337 "WET BERTH EXTRA DAYS" IS THE ONLY ADDITIONAL COMPENSATION JUSTIFIED.

034 HOUSE COATING

WE AGREE WITH MOST OF THEIR COMMENTS REGARDING THE HOUSE COATING. WE DID RUN OUT OF PAINT AND THAT CAUSED A LOSS OF EFFICIENCY. WE DID HAVE TO WASH DOWN THE HOUSE ONCE TO RE-START THE PAINTING AND AGAIN BECAUSE OF BOILER LIGHT OFF. WE ALSO AGREE THAT NMIW HAD TO SET UP AND TEAR DOWN EQUIPMENT AND RE-MASK SOME DOORS. HOWEVER, OUR REVIEW OF THE BREAKDOWN OF THE AGREED PRICE FOR ITEM 34-B (F.O. 277) SHOWS THAT WE NEGOTIATED AND AGREED ON COMPENSATION FOR THE WASH DOWN PRIOR TO RE-STARTING THE PAINTING, AN ADDITIONAL WASHDOWN THE FOLLOWING MORNING BECAUSE OF SOOT AND THE DELAY AND DISRUPTION OF THE ORIGINAL WORK ITEM DUE TO RUNNING OUT OF OWNER FURNISHED PAINT. ALTHOUGH WE DISCUSSED THE EFFECT OF THE HOUSE COATING DELAY ON THE COATING OF THE DECK IN ZONE 4, WE ARE NOT CONVINCED THAT THERE ACTUALLY WAS A DELAY. IF NORTHWEST MARINE CONTENDS THAT ADDITIONAL COMPENSATION IS REQUIRED FOR THIS ZONE 4 DELAY, IT SHOULD BE NEGOTIATED AS PART OF THE DECK COATING ITEM. IT IS EXXON'S POSITION THAT WE NEGOTIATED AND AGREED ON A FAIR PRICE FOR THE COATING OF THE HOUSE WHICH INCLUDED COMPENSATION FOR ALL OF THE EXTERNAL FACTORS THAT IMPACTED THE ORIGINAL WORK ITEM.

036 CARGO TANK COATING

THE SCHEDULE SUBMITTED WITH THE BID PACKAGE SHOWED CARGO TANK COATING COMMENCING ON DAY 6 OF THE CONTRACT. IT WAS ASSUMED THAT THIS WOULD HAVE ALLOWED COMPLETION OF IN TANK WORK IN AT LEAST ONE OF THE FIVE TANKS ORIGINALLY SCHEDULED PRIOR TO STARTING BLASTING. NORTHWEST MARINE'S PLAN TO BLAST AND COAT #5 CENTER CARGO TANK BOTTOM BEFORE WORKING ANY OF THE STEEL, PIPING AND ASSOCIATED STAGING WAS NEVER APPROVED OR EVEN DISCUSSED WITH THE OWNER'S REPRESENTATIVE. NMIW IS CORRECT IN THEIR ASSERTION THAT EXXON OBJECTED TO COATING #5 CENTER BEFORE COMPLETION OF MECHANICAL WORK. HOWEVER, IT WAS NOT BECAUSE OF ADDITIONAL STEEL WORK. THE ORIGINAL BID SPECIFICATION CONTAINED A SUBSTANTIAL AMOUNT OF STEEL WORK IN #5 CENTER; A CVK INSERT (2 EA 20 FT STAGING TOWERS), FRACTURE REPAIR AT TWO WEB FRAME TERMINATIONS (4 EA 15 FT STAGING PLATFORMS), REPAIR OF SEVEN FRACTURES ON THE FWD TRANSVERSE BULKHEAD HORIZONTAL STIFFENERS. EXXON WAS AWARE THAT THE FRACTURE IN THE CVK MENTIONED ABOVE HAD PROGRESSED THROUGH THE BULKHEAD INTO BOTH BUNKER TANKS AND THAT THERE WOULD BE SOME GROWTH IN THE REPAIR OF THE CVK AND BHD 60. WE TOLD MR. RIDDLE AND MR. LUNDMARK OF NORTHWEST MARINE ABOUT THE NEED TO REPAIR THE BUNKER TANK BULKHEAD WHEN THEY VISITED OUR WEST COAST OFFICE PRIOR TO THE BID AWARD. WE ALSO DISCUSSED THE BUNKER TANK BULKHEAD REPAIR WITH THE SHIP'S SUPERINTENDENT, MR. KUNKEL, ON 13 JUNE 1989 DURING THEIR PRE-ARRIVAL SURVEY AND ON 19 JUNE 1989 AT THE ARRIVAL CONFERENCE WITH THEIR TRADE FOREMEN. WE COULD NOT WRITE UP THE REPAIR OF THIS PROBLEM BECAUSE WE HAD NOT YET BEEN ABLE TO ENTER THE BUNKER TANK TO COMPLETE A THOROUGH SURVEY. ALTHOUGH THERE WAS GROWTH IN STEEL AND PIPING IN #5 CENTER TANK, EXXON'S OBJECTION TO THE "NEW" TANK COATING SCHEDULE WAS BASED ON OUR FEELING THAT THE COATING JOB WOULD NOT BE ADEQUATE UNLESS ALL STEEL AND PIPE WORK WAS COMPLETED AND ALL STAGING REMOVED FROM THE TANK PRIOR TO STARTING THE TANK COATING PROCESS. IN ORDER TO HELP NORTHWEST MARINE COMPLETE THE MORE ESSENTIAL TANK COATING WORK, EXXON CANCELLED THE COATING OF #2 PORT AFT AND #2 STARBOARD AFT CARGO TANKS. WE ALSO AUTHORIZED A SPECIFICATION CHANGE TO APPLY THE PAINT IN A SINGLE COAT WITH ONE STRIPE COAT IN LIEU OF TWO FULL COATS AND TWO STRIPE COATS. IN SUMMARY, IT WAS EXXON'S CONCLUSION AFTER HAVING NEGOTIATED AND AGREED ON THE PRICES FOR THE CHANGES TO THIS ITEM IN AUGUST, THAT OUR STREAMLINING OF THE TANK COATING WORK HAD OFFSET THE DELAY AND DISRUPTION CAUSED BY STEEL AND

PIPING CHANGES AND THE INCREASED DECK BLASTING AND COATING. WE FEEL THAT NMIW SHOULD CONSIDER THE FOLLOWING FACTORS IN EVALUATING WHY THERE WAS AN OVERRUN ON THE TANK COATING ITEM: PROBLEMS WITH NMIW'S LARGE TANK VENTILATION BLOWER ON STARTUP CAUSED A GREAT DEAL OF LOST EFFICIENCY AND DELAYS; #2 CTR TANK WAS BLASTED WITHOUT ADEQUATE VENTILATION (DUE TO BLOWER FAILURE) WHICH REQUIRED AN EXTENSIVE WASHDOWN OF THE TANK AFTER COATING TO REMOVE BLASTING DUST FROM THE UPPER AREAS OF THE TANK. ALSO, IT APPEARED THAT EARLY IN THE JOB (21-26 JUNE) MANPOWER WAS STRETCHED VERY THIN DUE TO THE ONGOING WORK ON THE S.S. ASPEN IN DRYDOCK 4 AND PIERSIDE. THIS MAY HAVE PREVENTED NMIW FROM COMPLETING STEEL AND PIPING IN A MORE TIMELY MANNER IN THE TANKS TO BE COATED. EXXON FEELS THAT THE CARGO TANK COATING ITEM WAS NEGOTIATED AND THE PRICE AGREED UPON BY BOTH PARTIES. WE DO NOT FEEL THAT ANY ADDITIONAL COMPENSATION IS MERITED.

101 - STEEL REPAIRS

WE AGREE THAT THERE WAS SIGNIFICANT ADDITIONAL STEEL WORK IDENTIFIED DURING THE COURSE OF THE BATON ROUGE REPAIR. HOWEVER, NMIW'S ORIGINAL SCHEDULED SHOWED STEEL COVERING 19 OF THE 21 DAY REPAIR PERIOD WITH A TOTAL PRICE OF \$920K FOR PART I AND II WORK. THE ACTUAL DOLLARS SPENT ON STEEL WAS \$912K. WE FEEL IT IS NORMAL FOR A 20 YEAR OLD VESSEL GOING THROUGH SPECIAL SURVEY #4 TO HAVE GROWTH IN TANK FRACTURES AND CLAD WELDING OF PITS AND ERODED WELDS. BECAUSE OF THE EXPECTED STEEL GROWTH, WE WROTE UP EXTENSIVE PART II SECTIONS AND KEPT THE MONEY FOR THE PART II STEEL WORK IN OUR BUDGET. EXXON DOES NOT AGREE WITH MOST OF THE SHIPYARD'S REASONING FOR OVERRUNS ON STEEL REPAIRS. GROWTH IN DRYDOCK CRITICAL STEEL WORK WAS SIMPLY NOT THERE. WE HAVE REVIEWED AGAIN THE LIST OF DRYDOCK CRITICAL STEEL PROVIDED TO US IN SUPPORT OF NMIW'S 6/28/89 REQUEST FOR A DRYDOCK AND CONTRACT EXTENSION. UNDER ITEM 101, THE MAJOR PART OF THE WORK TO BE ACCOMPLISHED IN DRYDOCK WAS TO WELD OUT AS MUCH OF THE LONGITUDINAL BULKHEAD BETWEEN 3C AND 3P AS POSSIBLE, THIS ITEM WAS PART I WORK. WE ALSO REQUESTED THAT A CVK INSERT IN #2 CENTER WHICH WAS CHANGE ORDER WORK BE COMPLETED IF AT ALL POSSIBLE. WE HAD NUMEROUS DISCUSSIONS WITH THE STEEL DEPARTMENT AND THE SHIP'S SUPERINTENDENT WITH REGARD TO THE WELDING OF BOTTOM PITTING AND ERODED WELDS. ALTHOUGH THIS TYPE OF WORK IS BEST DONE IN DRYDOCK, WE SPECIFICALLY TOLD THE STEEL PEOPLE THAT THIS WORK WAS NOT REQUIRED TO BE DONE IN DRYDOCK AND EVEN PROVIDED AN ABS APPROVED WELDING PROCEDURE TO DO THIS WORK IN THE WATER.

THERE WAS SOME DILUTION OF SKILLED PERSONNEL CAUSED BY THE ADDITION OF ITEMS TO REPLACE THE BRINE OVERBOARD SHELL PENETRATION (ITEM 219) AND REPAIR THE MAIN CONDENSER OVERBOARD PIPE (ITEM 221). HOWEVER, IT IS OUR OPINION THAT THESE WERE SMALL ITEMS WHICH DID NOT AFFECT THE OVERALL SCHEDULE. EXXON DID NOT WITNESS A GREAT DEAL OF MOVING MEN AND EQUIPMENT AS THE SHIPYARD HAS CLAIMED. WE DID SEE A CONCENTRATION ON WORK AGAINST THE SHELL IN THE DRYDOCK, BUT THIS IS NORMAL. THESE WORK ASSIGNMENTS WERE MADE BY NMIW, NOT BY EXXON. ON 6/30/89 WE WERE FINALLY ABLE TO AGREE WITH THE YARD ON THE MAJOR UNRESOLVED ISSUES IN THE CONTRACT AT THAT TIME: REMOVAL OF THE SHIP'S BUNKERS, DRYDOCK CRITICAL STEEL WORK, AND THE UNDOCKING TIME. AT THAT MEETING, WE TOLD MR. ECKELHOFF TO CONCENTRATE ON THE LONGITUDINAL BULKHEAD REPAIR IN #3 CENTER, THE CVK INSERT IN #2 CENTER AND THE PIPING SHELL PENETRATIONS. WE ALSO AUTHORIZED THE STEEL DEPARTMENT TO WORK 12 HOUR DAYS IN ORDER TO ACHIEVE THE UNDOCKING TIME AT EXXON'S EXPENSE. DURING THE 6/28-30 TIME FRAME WE HAD MANY DISCUSSIONS WITH NMIW REGARDING THE AVAILABILITY AND QUALITY OF STEEL MANPOWER. OUR RECOLLECTION OF THE PROBLEM WAS THAT THE YARD WAS UNABLE TO HIRE ADDITIONAL MANPOWER FOR A SHORT TERM JOB SUCH AS THE BATON ROUGE. ALTHOUGH WE AGREE THAT NMIW APPEARED TO REACH THE LIMITS OF ITS STEEL

REPAIR CAPABILITY WITH AVAILABLE MANPOWER, WE FEEL THAT A LARGE PART OF THE PROBLEM MAY HAVE BEEN THE ONGOING WORK ON THE S.S. ASPEN WITH MAJOR STEEL WORK TO ACCOMPLISH IN DRYDOCK FROM 6/20-25. IT APPEARED THAT STEEL MANPOWER WAS VERY SCARCE DURING THAT TIME FRAME AND THE ONLY JOBS REALLY WORKED WITH ANY EFFORT WERE THE BOW DAMAGE (103) AND THE LONGITUDINAL BULKHEAD REPAIRS IN 3C-3P. WE ALSO WOULD LIKE TO POINT OUT THAT NMIW TOOK ON AN EMERGENCY STEEL REPAIR OF ANOTHER VESSEL ACROSS THE RIVER DURING THE BATON ROUGE JOB. THIS WAS CERTAINLY UNUSUAL IF THEY WERE REALLY SHORT ON MANPOWER. IN CONCLUSION, EXXON FEELS THAT NORTHWEST MARINE, ESPECIALLY THE STEEL FOREMEN WHO WORKED THE JOB, RON HUDSON AND LES PAYNE DID AN OUTSTANDING JOB COVERING THE WORK IDENTIFIED. THEY WORKED VERY CLOSELY WITH OUR STEEL MAN, BEN SHEAFFER, TO MINIMIZE UNNECESSARY MOVING OF MEN AND EQUIPMENT AND OVERALL, OUR FEELING WAS THAT THE STEEL PART OF THE JOB WENT VERY SMOOTHLY. WHEN WE NEGOTIATED THE FINAL INVOICE WITH NMIW, WE AGREED TO PRICES FOR ALL OF THE CHANGE ORDER WORK. IT WAS OUR FEELING AT THE END OF OUR NEGOTIATIONS THAT ALTHOUGH WE HAD BEEN VERY GENEROUS WITH OUR PRICING OF THE CHANGE ORDERS, WE HAD DONE SO TO COMPENSATE NORTHWEST MARINE FOR THE IMPACT ON THE ORIGINAL WORK. AT OUR LAST NEGOTIATING SESSION, NMIW CLAIMED THAT THEY REQUIRED AN ADDITIONAL \$27,400 TO ADEQUATELY COMPENSATE THEM FOR THE STEEL ITEMS. NOW THEY ARE ASKING FOR \$98,070 IN ADDITIONAL COMPENSATION. THIS GROWTH IN THE CLAIM CONCERNS US. AS WE STATED, EXXON FEELS THAT WE COMPENSATED NORTHWEST MARINE FOR IMPACT ON THE ORIGINAL STEEL ITEM IN PRICING THE CHANGE ORDER WORK. WE DO NOT FEEL THAT THERE IS MUCH VALIDITY TO THEIR CLAIMS OF MOVING "MEN AND EQUIPMENT", GROWTH IN "OWNER REQUESTED DRYDOCK WORK" OR LOSSES OF EFFICIENCY DUE TO LESS SKILLED MANPOWER. WE ARE WILLING TO DISCUSS THIS ITEM FURTHER WITH THEM, HOWEVER NORTHWEST MARINE SHOULD BE PREPARED TO SHOW EXXON IN MUCH GREATER DETAIL EXACTLY HOW OUR ACTIONS OR INACTION IN RUNNING THIS JOB CAUSED YOU TO EXCEED YOUR ORIGINAL BUDGET BY 44 PERCENT.

102 - MISCELLANEOUS HULL DAMAGE

THIS ITEM WAS COMPLETED AS WRITTEN IN THE ORIGINAL BID SPECIFICATION WITH ONE CHANGE TO ENLARGE THE SIZE OF ONE INSERT FROM 24" X 48" TO 36" X 48". SINCE EXXON FEELS THAT THERE WAS NO OVERALL WORK GROWTH AS STATED IN OUR GENERAL COMMENTS AND THERE WAS ALSO NO OVERALL STEEL GROWTH IN DOLLARS SPENT COMPARED TO THE ORIGINAL PART I AND II, WE DO NOT CONSIDER THE CLAIM FOR IMPACT COSTS AGAINST THIS ITEM TO BE VALID.

103 - HULL DAMAGE PORT BOW

EXXON DISAGREES WITH NMIW'S CLAIM THAT GROWTH AND THE ASSOCIATED MANPOWER SHORTAGE CAUSED YOU TO EXCEED YOUR BUDGET ON THIS ITEM. OUR REASONS ARE THE SAME AS STATED ABOVE FOR ITEM 102. ONCE AGAIN, THE WORK WAS ACCOMPLISHED PRETTY MUCH AS WRITTEN IN THE ORIGINAL SPECIFICATION, AND THIS WORK AREA WAS OUTSIDE OF THE DECK BLASTING AND COATING AREA.

WE FEEL THAT NMIW SHOULD LOOK AT THE DECISION MADE WITHIN THEIR STEEL DEPARTMENT TO REMOVE, STRAIGHTEN AND RE-USE ALL OF THE BULB PLATE TRANSVERSE SHELL FRAMES AND THE LARGE BULB PLATE ON THE TOP OF THE BULWARK. THE BOILERMAKERS DID AN EXCELLENT JOB IN ACCOMPLISHING THIS WORK, HOWEVER IT WAS MUCH MORE TIME CONSUMING AND THEREFORE MORE EXPENSIVE TO COMPLETE THE REPAIRS IN THAT MANNER. WE ALSO BELIEVE, AS STATED EARLIER THAT THE ONGOING WORK ABOARD THE ASPEN PROBABLY CAUSED THE YARD TO EXPEND MORE OVERTIME THAN NORMALLY REQUIRED.

EXXON DOES NOT FEEL THAT THE IMPACT CLAIM FOR THIS ITEM WARRANTS ADDITIONAL PAYMENT.

113 - CARGO PIPING ON DECK

THE DECK PIPING HYDROSTATIC TEST WAS COMPLETED ON 6/21, MOST OF THE HYDRO TEST PROBLEMS WERE WITH THE PIPING IN THE TANKS. EXXON DOES NOT FEEL THAT THE PIPE HYDRO HAD ANY AFFECT ON THE DECK CARGO PIPING WORK.

WE DISAGREE WITH NMIW'S CLAIM THAT WE DELAYED IN PUTTING WORK IN HAND WHICH WAS KNOWN. AS NMIW KNOWS, WE DID A MAJOR REWORK OF THE DECK CARGO PIPING, REPLACING 14 OF 19 DRESSER COUPLINGS ON DECK AND IN THE PROCESS WE DISCOVERED MANY WASHED OUT PIPE ENDS WHICH REQUIRED REPLACEMENT AND CLAD WELDING. THE REPAIR CHANGE ORDERS WERE ISSUED AS THE DEFECTS WERE DISCOVERED SO THAT NMIW COULD FIT THE WORK INTO THE SCHEDULE AS SOON AS POSSIBLE. WE FEEL THAT THE AMOUNT AND TYPE OF CHANGE ORDER WORK SHOULD HAVE BEEN EXPECTED. THAT IS WHY WE HAD PART II MONEY IN OUR BUDGET. WE ESTIMATE THE OVERALL GROWTH IN DECK CARGO PIPING TO BE 33 PERCENT.

WE FEEL THAT THE YARD MAY HAVE UNDERESTIMATED THE LABOR REQUIRED TO REPLACE THE 14 DRESSER COUPLINGS. MANY OF THE RENEWALS REQUIRED BREAKING MULTIPLE FLANGES, REMOVING INTERFERENCES AND CRANE SERVICE TO MOVE MORE THAN ONE SECTION OF PIPE.

IN THE PIPING EXTRAS AS WITH THE STEEL EXTRAS, WE USED AN O.T. MAN HOUR RATE WHERE REQUIRED TO PRICE THE CHANGE ORDER WORK SINCE OUR UNDERSTANDING WAS THAT WE WERE PAYING THAT RATE TO COMPENSATE NORTHWEST MARINE FOR THE FACT THAT THE CHANGE ORDER WORK REQUIRED THEM TO WORK OVERTIME. FOR THE REASONS STATED ABOVE, WE FEEL THAT NO ADDITIONAL COMPENSATION FOR THIS ITEM IS REQUIRED.

125 - WT DOORS AND HATCHES

EXXON'S POSITION ON THIS ITEM IS AS STATED PREVIOUSLY; THE OVERALL GROWTH ON THIS JOB WAS NOT EXCESSIVE, IN FACT NORTHWEST MARINE SHOULD HAVE BEEN PREPARED TO ACCOMPLISH THE VOLUME OF WORK CONTAINED IN PARTS I,II AND III IN THE ORIGINAL 21 DAY BID TIME.

ONCE AGAIN, WE PAID A PREMIUM FOR CHANGE ORDER WORK ON THIS ITEM WITH THE UNDERSTANDING THAT OVERTIME HAD TO BE EXPENDED ON THE CHANGE ORDER WORK SO THAT THE ORIGINAL ITEM COULD BE ACCOMPLISHED ON STRAIGHT TIME.

WE DO NOT FEEL THAT THE IMPACT ON THIS ITEM WAS SIGNIFICANT AND THE GROWTH OF 12 PERCENT IS NOT EXCESSIVE.

EXXON DOES NOT AGREE WITH NMIW'S POSITION REGARDING IMPACT COSTS FOR THIS ITEM.

131 - DECK STEAM PIPE SUPPORTS

135 - PIPE SUPPORTS ON DECK

ITEM 131: THIS WAS A FAIRLY SMALL ITEM IN THE OVERALL SCOPE OF WORK ON DECK AND SHOULD HAVE EASILY BEEN WORKED INTO THE SCHEDULE TO AVOID CONFLICT WITH THE DECK BLASTING AND COATING. MOST OF THE WORK ON THIS ITEM WAS DONE IN THE SHOP, FABRICATING AND GALVANIZING THE SADDLES UNDER PART II OF THE ITEM.

WE FEEL THAT THEIR PART II ESTIMATE TO FABRICATE AND INSTALL 10 SADDLES WAS LOW AND IS PROBABLY THE SOURCE OF THE BUDGET PROBLEM ON THIS ITEM.

WE DO NOT AGREE WITH NMIW'S CLAIM FOR ADDITIONAL PAYMENT FOR IMPACT COSTS.

ITEM 135: THIS WAS ALSO A FAIRLY SMALL ITEM WHICH THE PIPE PERSONNEL TENDED TO PUT ON THE BACK BURNER UNTIL LATE IN THE JOB. THAT APPROACH LEFT FEW OPTIONS IN DEALING WITH THE INTERFERENCE WITH DECK BLASTING AND COATING AND PROBABLY RESULTED IN EXCESSIVE OVERTIME CHARGES.

WE BELIEVE THAT THIS ITEM IS TIED INTO THE OVERALL SCOPE OF PIPING WORK ACCOMPLISHED DURING THE REPAIR. AS WITH THE OTHER ITEMS WE PAID PREMIUM PRICES FOR THE CHANGE ORDER WORK WHICH WAS TO COMPENSATE NMIW FOR IMPACT ON THE ORIGINAL WORK.

ONCE AGAIN, WE CANNOT SEE THAT AN ADDITIONAL PAYMENT FOR IMPACT IS WARRANTED.

145 - UPPER DECK COATING

IT IS UNFORTUNATE THAT NMIW HAD TO RESCHEDULE THE DECK COATING SO MANY TIMES, HOWEVER, THINGS PROBABLY WOULD HAVE GONE SMOOTHER IF THEY HAD SHARED THEIR SCHEDULING IDEAS WITH EXXON. AS I SAID PREVIOUSLY, CHANGES IN SCHEDULES SEEMED TO HAVE BEEN MADE IN A VACUUM.

NMIW IS INCORRECT IN THEIR STATEMENTS REGARDING THE FRESH WATER WASHING OF THE DECK. THE ORIGINAL SPECIFICATION CALLED FOR A FRESH WATER WASH (THIS MEANS A FIRE HOSE OR GARDEN HOSE) OF 100% OF THE DECK AREA TO REMOVE SALTS, DIRT, OIL AND GREASE. THAT WORK WAS ACCOMPLISHED AND NMIW WAS PAID AS PART OF THE AGREED PRICE FOR THE ORIGINAL ITEM. EXXON SPECIFIED A HIGH PRESSURE WATER WASH OF 25,000 SQUARE FEET OF THE MAIN DECK PRIOR TO COATING. THIS MEANS A RENTAL MACHINE CAPABLE OF 3000 PSI PRESSURE WASHING. WE WERE ADVISED BY NMIW'S PAINT AND SANDBLAST FOREMEN THAT IT WAS BETTER TO SWEEP EVERYTHING AND ELIMINATE THE H.P. WATER WASHING. IT WAS ALSO OBVIOUS DURING THE FIRST DAY OF THE CONTRACT THAT THE MEN OPERATING THE H.P. WASHING MACHINE WERE NOT HOLDING THE NOZZLE CLOSE ENOUGH TO THE DECK TO ADEQUATELY CLEAN AND DEGREASE THE SURFACE. IN OUR AGREED PRICE FOR FIELD ORDER 241 (145-C) WE PAID NMIW FOR: (1) THE COST OF RENTING THE H.P. WATER WASH MACHINE, (2) THE COST OF THE LABOR EXPENDED ON THE FIRST DAY OF THE CONTRACT ATTEMPTING TO H.P. WASH THE DECK, (3) THE DIFFERENTIAL FOR SANDSWEEPING THE DECK INSTEAD OF HIGH PRESSURE WATER WASHING. ALL OF THESE FIGURES WERE DISCUSSED WITH THE YARD AND AGREED AS BEING A FAIR PRICE FOR THE WORK ACTUALLY ACCOMPLISHED BY NORTHWEST MARINE. I HOPE AT THIS POINT IN THE SETTLEMENT OF THE CONTRACT THEY DO NOT WISH TO OPEN UP ALL ITEMS FOR RENEGOTIATION.

REGARDING THE VERIFICATION OF THE SQUARE FOOTAGE IN EACH ZONE PRIOR TO BLASTING, I REFER YOU TO SECTION II. PARA. C OF THE SPECIFICATION WHICH REQUIRES THIS AGREEMENT. IF NORTHWEST MARINE FELT THAT THIS PART OF THE PAINTING EVOLUTION WOULD CAUSE LOSS OF EFFICIENCY AND DOWN TIME THEN THEY SHOULD HAVE ATTACHED A PRICE TO THAT PARAGRAPH IN THE SPECIFICATION. WE DISCUSSED THE SURVEY PROCESS WITH THE SANDBLAST FOREMAN AND DECIDED THAT IT WOULD BE FAIRER TO THE YARD TO WALK EACH ZONE PRIOR TO BLASTING SO THAT NEWLY DAMAGED AREAS COULD BE INCLUDED IN THE TOTALS.

EXXON BELIEVES THAT THEIR IMPACT COMMENTS REGARDING ADDITIONAL SET UP AND TEAR DOWN, ADDITIONAL PIECEMEAL CLEANING AND DELAYS CAUSED BY RUNNING OUT OF THE

DECK RED PAINT WERE DISCUSSED AND WORKED INTO OUR AGREED PRICE FOR FIELD ORDER 281 (ITEM 145-D). DURING THE NEGOTIATION OF THAT ITEM, WE RE-WORKED THE GROWTH, DELAY AND DISRUPTION MANY DIFFERENT WAYS BEFORE EXXON AGREED TO THE PRICE OFFERED BY NORTHWEST MARINE OF \$49,324.

EXXON WAS AWARE, AT THE CONCLUSION OF OUR NEGOTIATIONS IN AUGUST, THAT NORTHWEST MARINE STILL FELT THAT SOME COMPENSATION WAS DESERVED FOR THE RE-BLASTING OF ZONE 3 AFTER RAIN ON 7/16 AND THAT THEY WERE LOOKING FOR AN ADDITIONAL \$52K FOR THE DECK COATING FOR DELAY AND DISRUPTION DUE TO THE GROWTH IN WORK SCOPE. HOWEVER, THAT \$52K HAS NOW GROWN TO \$74K AND OUR VERBAL REQUEST FOR A BREAKDOWN OF THE COSTS TO REBLAST ZONE 3 WAS DEFERRED PENDING MR. ZAVIN'S VISIT TO HOUSTON LATE IN NOVEMBER.

WE WOULD ALSO LIKE TO POINT OUT THE FOLLOWING CONCESSIONS MADE BY THE OWNER TO ASSIST IN THE TIMELY COMPLETION OF THE DECK COATINGS: (1) WE EXCLUDED THE AREA BENEATH THE MAIN DECK WIREWAY FROM THE BLASTING DUE TO FEARS OF CABLE DAMAGE, (2) WE REDUCED THE SCOPE OF ELECTRICAL WIRE RENEWALS, ITEM 99, BY 50 PERCENT, (3) WE ATTEMPTED TO REDUCE THE SCOPE OF HYDRAULIC PIPING RENEWALS, ITEM 172, HOWEVER THAT IS STILL UNDER DISCUSSION, (4) WE REDUCED THE SQUARE FOOTAGE OF THE CARGO TANK COATING AND WENT TO A SINGLE COAT APPLICATION, AND (5) WE PAID THE PREMIUM PAY TO BLAST ZONE 5 ON THE 4TH OF JULY. WE ALSO PAID A HANDSOME PREMIUM ABOVE THE BID SPECIFICATION UNIT RATES FOR SPOT BLASTING AND SWEEPING IN CALCULATING THE PRICE FOR THE GROWTH UNDER FIELD ORDER 281 (145-D). THIS PREMIUM RATE WAS PAID TO COMPENSATE NORTHWEST MARINE FOR THE IMPACT OF THE GROWTH.

WE AGREE THAT WE WERE NOTIFIED EARLY IN THE CONTRACT REGARDING THE REQUIREMENT FOR EXTRA TIME FOR GROWTH IN DECK BLASTING AND FEEL THAT THERE MAY BE SOME VALIDITY TO THE SHIPYARD'S POSITION REGARDING THE RE-BLAST OF ZONE 3. HOWEVER, NMIW SHOULD BE PREPARED TO PRESENT DETAILS AND ESTIMATES TO SUBSTANTIATE THEIR POSITION IN THIS AREA.

172 - HYDRAULIC PIPING

WE HAVE DISCUSSED MANY TIMES EXXON'S DECISION TO SLEEVE 11 SECTIONS OF PIPE INSTEAD OF RENEWING THEM. OUR POSITIONS HAVE NOT CHANGED. HOWEVER, IF SLEEVING IS TRULY MORE EXPENSIVE THAN RENEWAL, WHY WERE WE CHARGED \$3912 FOR THE RENEWAL OF ONE SECTION OF PIPE INSTEAD OF SLEEVING IT? (SEE FIELD ORDER 320, ITEM 172-E.) IF NMIW'S POSITION IS CORRECT, WE SHOULD HAVE RECEIVED A CREDIT FOR THAT CHANGE.

WE DO NOT RECALL BEING TOLD EARLY ON BY NMIW THAT THE SLEEVING APPROACH WOULD BE MORE EXPENSIVE. WE SUBMITTED THE CHANGE ORDER ON 6/23 AND RECEIVED THE YARD'S ESTIMATE ON 7/10. MOST OF THE WORK HAD ALREADY BEEN COMPLETED BY THAT TIME. WE THOUGHT THAT IT WAS AN ERROR AND POSSIBLY THE PARENTHESES WHICH INDICATE A CREDIT WERE OMITTED.

VIRTUALLY ALL OF THE ACTUAL SLEEVING WORK WAS DONE ON JULY 4TH WITH EXXON PAYING THE OVERTIME PREMIUM. THERE WAS SUCH A VOLUME OF PIPING WORK ON THIS JOB THAT THE PIPE SHOP WAS COMPLETELY FULL AND PIPE WAS BEING SPOOLED IN THE BOILERMAKERS SHOP. THE X-RAYS OF WELDS TOOK EXTRA TIME AND THE PICKLING TURNAROUND WITH A SUBCONTRACTOR TOOK 3 DAYS. AS A CONCESSION, WE ALLOWED THE HYDROSTATIC TEST, AND BLASTING/COATING OF THE PIPING ON BOARD.

WE FEEL THAT NMIW SHOULD LOOK AT THE FOLLOWING PROBLEMS IN EVALUATING THE REASONS FOR YOUR BUDGET OVERRUN ON THIS ITEM: (1) ELECTRICAL PROBLEMS WITH THE FLUSHING RIG DELAYED THE HYDRO AND FLUSH ONE FULL DAY, (2) ACCIDENTAL WATER CONTAMINATION OF THE HYDRAULIC OIL COST NMIW A GREAT DEAL OF LABOR, FILTER UNIT RENTAL AND LUBE OIL REPLACEMENT, (3) THE FLUSHING TIME REQUIRED TO GET ACCEPTABLE CLEANLINESS WAS PROBABLY TWICE WHAT IT COULD HAVE BEEN DUE TO SLOPPY MASKING AND PROTECTION OF OPEN LINES WHILE SANDBLASTING, (4) THE MACHINE SHOP REMOVED LABELS FROM THE ON-DECK FILTER UNITS OVERHAULED UNDER ITEM 169, THIS CAUSED A TREMENDOUS LOSS OF EFFICIENCY AND REWORK IN REINSTALLING THE 2 INCH SUPPLY AND RETURN LINES TO EACH WINCH, (5) THERE WERE ALSO A NUMBER OF MINOR AND MAJOR HYDRAULIC OIL LEAKS WHICH REQUIRED LABORERS TO CLEAN UP ON DECK DUE TO IMPROPER GASKETS, LOOSE BOLTS AND POOR COMMUNICATION.

EXXON AGREES THAT WE STILL HAVE THE OUTSTANDING FIELD ORDER TO RESOLVE REGARDING THE SLEEVING OF THE PIPE HOWEVER WE DO NOT FEEL THAT NMIW IS DUE ANY IMPACT COMPENSATION UNDER THE ORIGINAL ITEM.

REVIEW SUMMARY:

WE IMMEDIATELY TAKE ISSUE WITH NORTHWEST MARINE'S ORIGINAL PRODUCTION SCHEDULE. WE SAW THE SCHEDULE IN AN UNFINISHED CONDITION DURING THE FIRST FEW DAYS OF THE CONTRACT. IT WAS NOT COMPLETED UNTIL 6/28/89, SEVEN DAYS AFTER THE START OF WORK. THE SCHEDULE IS SO VAGUE REGARDING SEQUENCING OF THE TANK AND VOID RELATED WORK, STEEL, PIPING AND COATING THAT IT IS USELESS. IT ALSO SHOWS BLASTING TOPSIDE WHILE IN THE DRYDOCK WHICH USUALLY IS IMPRACTICAL DUE TO GRIT CONTAMINATION OF THE HULL COATING WORK AND VICE VERSA.

ONE OF THE BIGGEST PROBLEMS WE FACED IN THE EARLY PART OF THE CONTRACT WAS WHAT APPEARED TO BE A LACK OF PLANNING AND SCHEDULING PRIOR TO THE SHIP'S ARRIVAL.

WE FEEL THAT THROUGHOUT THIS DOCUMENT NORTHWEST MARINE HAS OVER STRESSED THE LATENESS OF SOME CHANGE ORDER WORK. MOST OF THE ITEMS ISSUED AFTER 7/12 WERE TO DOCUMENT WORK ALREADY COMPLETED OR TO ACCOMPLISH SMALL, LAST MINUTE EMERGENCY REPAIRS.

TANK/VOID RELATED WORK PACKAGE:

OUR COMMENTS REGARDING STEEL HAVE BEEN PREVIOUSLY STATED, THERE IS NOTHING TO ADD WHICH IS RELATED TO THE IMPACT ANALYSIS CHART.

THE CARGO PUMP REPAIRS BECAME A CRITICAL ITEM BECAUSE THE DISASSEMBLY WAS DEFERRED APPROXIMATELY 1 WEEK WHILE THE MACHINISTS WERE WORKING THE S.S. ASPEN.

WE ARE SURPRISED TO SEE THAT THE REMOVAL OF THE SHIP'S BUNKERS AND GAS FREEING OF THE PORT BUNKER TANK ARE NOT SHOWN AS A CRITICAL ITEM. PROCRASTINATION IN FINDING A BARGE AND MISINFORMATION REGARDING THE ACCEPTABILITY OF THE SULFUR CONTENT OF THE FUEL CAUSED A COMPLETE BREAKDOWN IN THE FLOW OF WORK THAT DEPENDED ON THE BUNKER TANK BEING GAS FREE. NORTHWEST MARINE WAS VERY FORTUNATE THAT EXXON'S LOCAL AGENT FOUND A BARGE COMPANY WILLING TO STORE THE OIL WHILE REPAIRS WERE ACCOMPLISHED. NMIW ALSO LOST VERY LITTLE PRODUCTION TIME BECAUSE OF EXXON'S INSISTENCE THAT NMIW GET THE SHIP OFF THE DRYDOCK ON TIME, 6/26, TRANSFER THE BUNKERS THAT DAY (A SUNDAY) AND GAS FREE THE TANK OVER THE 4TH OF JULY HOLIDAY. HAD WE AGREED TO STAY ON THE DOCK AN ADDITIONAL THREE DAYS AS REQUESTED BY NMIW, WE WOULD HAVE LOST TWO OR THREE DAYS OF HOT WORK.

DRYDOCK RELATED WORK PACKAGE:

WE HAVE NOTHING TO ADD TO OUR PREVIOUSLY STATED COMMENTS REGARDING THE DRYDOCK WORK. WE WOULD LIKE TO STRESS THAT MOST OF THE "DRYDOCK CRITICAL" STEEL WORK WAS IN THE ORIGINAL SPECIFICATION AND NMIW'S WORK ON THE S.S. ASPEN PROBABLY CREATED MORE OF A DISRUPTION THAN OUR CHANGE ORDERS. ALSO, THE NEED TO GET THE SHIP OFF THE DRYDOCK TO TRANSFER THE BUNKERS, COMPLETE THE STEEL REPAIRS IN #5 CENTER, AND RE-LOAD THE BUNKERS TO SUPPORT LITE OFF OF THE MACHINERY FAR OUTWEIGHED THE STEEL SUPERINTENDENT'S IDEAS REGARDING WHICH STEEL WORK SHOULD BE DONE PRIOR TO RE-FLOATING.

DECK AND HOUSE RELATED WORK PACKAGE:

AS STATED PREVIOUSLY, THE ORIGINAL SCHEDULE FOR THE TOPSIDE WORK APPEARS UNREALISTIC DUE TO BLASTING AND COATING CONFLICTS WITH DRYDOCK WORK. IN FACT,

NO TOPSIDE OR TANK BLASTING WAS CONDUCTED WHILE THE VESSEL WAS IN DRYDOCK. THE SCHEDULE FOR THE COMPLETION OF THE REPAIRS WAS PUT TOGETHER BY THE SHIP'S SUPERINTENDENT, AND OUR REPAIR STAFF ON 7/2 WHILE WAITING FOR THE VESSEL TO SHIFT TO THE WET BERTH AFTER COMING OUT OF DRYDOCK.

THE FINAL ITEMS TO COMPLETE ON DECK WERE THE PAINT, THE CARGO AND BALLAST PUMPS, AND THE STEAM PIPE LAGGING. THE LAGGING WAS AN OPTIONAL ITEM WHICH WE WERE WORKING ON TIME AND MATERIAL TO GET AS MUCH AS POSSIBLE ACCOMPLISHED. THE PUMPS WERE ORIGINAL BID SPECIFICATION ITEMS WHICH GOT PUSHED BACK BY WORK ON THE CANS AND THE HIGH WORKLOAD ON THE MACHINISTS DURING THE FIRST WEEK OF THE CONTRACT. THE PAINT HAS PREVIOUSLY BEEN DISCUSSED.

THE DECK WORK PACKAGE WAS DEFINITELY THE CRITICAL PATH. WE TRIED, AS STATED EARLIER, TO EASE THE IMPACT OF THE MANY CHANGES BY REDUCING THE WORK SCOPE OF A NUMBER OF ITEMS. IN HINDSIGHT, THE ZONE CONCEPT WAS GOOD, AND THE PREVAILING WINDS REALLY KEPT THE DECK BLASTING INTERFERENCE DOWN TO A MINIMUM, BUT THE OTHER DECK AND TANK WORK PROBABLY COULD HAVE BEEN ACCOMPLISHED MORE EFFICIENTLY IF IT HAD ALSO BEEN PACKAGED IN ZONES.

MOST OF THE OTHER ITEMS NMIW CLAIMS AS IMPACTING THE WORK IN THIS PACKAGE HAVE BEEN PREVIOUSLY DISCUSSED EXCEPT WE WOULD LIKE TO POINT OUT AGAIN THAT THEY ARE OVER STRESSING THE LATE CHANGES (7/15 AND 7/16). THE DECK HYDRAULIC PIPING ITEM WAS AN EMERGENCY BLOWOUT WHICH OCCURRED ON STARTUP AND THE UPPER DECK AND HOUSE COATING CHANGES WERE TO DOCUMENT WORK PREVIOUSLY AUTHORIZED.

LIGHT OFF RELATED WORK PACKAGE:

EXXON FELT THAT NORTHWEST MARINE MADE AN EXCELLENT EFFORT TO COMPLETE THE MACHINERY WORK PRIOR TO LIGHT OFF. IN FACT, LIGHT OFF WAS ACHIEVED ON JULY 9TH.

WE HAVE NOTED THAT ASBESTOS REMOVAL IS NOT INCLUDED HERE. A GREAT DEAL OF TIME WAS LOST EARLY IN THE CONTRACT DUE TO ASBESTOS SHUTDOWNS OF THE MACHINERY SPACE WORK. EVEN THOUGH SAMPLES OF THE INSULATION WERE TAKEN DURING THE PRE-SHIPYARD SURVEY, ADEQUATE PRECAUTIONS WERE NOT TAKEN TO PREVENT DAMAGE TO THE TURBINE INSULATION. ASBESTOS WAS MUCH MORE OF A FACTOR THAN ANY ACTION OR INACTION BY EXXON.

ANOTHER MAJOR PROBLEM WAS THE HIGH WORKLOAD ON THE MACHINISTS DUE TO WORK ON THE ASPEN DURING THE FIRST WEEK OF THE JOB. ALL ENGINEER ROOM PUMP WORK WAS DEFERRED UNTIL THE DRYDOCKING. THIS PROBABLY CAUSED INEFFICIENCY AND EXCESSIVE OVERTIME.

THE VALVE SHOP BECAME OVERLOADED DURING THE DRYDOCKING PHASE OF THE JOB ALSO. WE AGREE THAT THERE WERE SOME ADDITIONAL VALVES TO BE OVERHAULED, BUT WE PAID PREMIUM PRICES FOR THAT WORK BECAUSE OF THE IMPACT.

EXXON MADE EVERY EFFORT TO AUTHORIZE WORK AS SOON AS IT WAS IDENTIFIED. MANY OF THESE MACHINERY ITEMS COULD NOT BE WRITTEN UNTIL THE PUMP OR VALVE WAS OPENED FOR INSPECTION.

HABITABILITY RELATED WORK PACKAGE:

WE HAVE NOTHING TO ADD REGARDING THIS PART OF THE JOB.

January 17, 1990

MEMO

TO: Mr. H. P. Leyendecker
FROM: S. M. Day
SUBJECT: EXXON BATON ROUGE SHIPYARD REPAIR
AT NMIW JUNE-JULY 1989

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After reviewing the impact documentation provided by Northwest Marine Iron Works dated 12/11/89, I offer my comments and observations regarding the repair of the Exxon Baton Rouge.

GENERAL COMMENTS:

Exxon was very pleased with the final outcome of the Baton Rouge repair. Both the contract inspectors and I felt that overall, Northwest Marine made an outstanding effort to complete all of the work identified as quickly as possible. There were a few rough spots during the course of the repair and some work which was very difficult to schedule without conflict. However, virtually all of the work was completed and the vessel is now in much better condition than when it arrived at NMIW.

First, I would like to comment on the scope of work contained in the bid specification compared to the volume of work actually accomplished. The total of the original part I, II, and III was \$4,925,878. The agreed total for work done on the Baton Rouge is \$3,802,458 as of this date. This amount is only 4% greater than the original part I bid amount and even if your total outstanding claim of \$479,178 is added to the agreed total, the amount is still substantially less than the part I, II, and III sum.

Exxon's bid letter to NMIW contained the following instructions regarding the calculation of the total repair days: "...should you feel that the items included in part II, part III, etc. will, in fact affect total repair time, please identify such items and the extent to which the repair period will be increased.". Since the bid contained no exceptions to the part II and III work, it was our conclusion that Northwest Marine was capable of accomplishing all of the work in the bid specification in 22 days. This conclusion should be kept in mind as NMIW is reading our comments regarding the amount of growth in work scope which has been claimed.

001 SERVICES

Exxon does not agree that the job growth on the Exxon Baton Rouge was inordinate. The bid price for services should have allowed for services to cover all of the work, (\$4.9M), contained in the bid specification. Northwest Marine has already been paid \$33K for four extra days of services and we are still negotiating with them regarding an additional \$46K for the remaining 5 days of services provided they were in excess of the original 21 day repair period. It is Exxon's position that the final price which we agree upon for field order number 337 "wet berth extra days" is the only additional compensation justified.

034 HOUSE COATING

We agree with most of their comments regarding the house coating. We did run out of paint and that caused a loss of efficiency. We did have to wash down the house once to re-start the painting and again because of boiler light off. We also agree that NMIW had to set up and tear

down equipment and re-mask some doors. However, our review of the breakdown of the agreed price for item 34-B (F.O. 277) shows that we negotiated and agreed on compensation for the wash down prior to re-starting the painting, an additional washdown the following morning because of soot and the delay and disruption of the original work item due to running out of owner furnished paint. Although we discussed the effect of the house coating delay on the coating of the deck in zone 4, we are not convinced that there actually was a delay. If Northwest Marine contends that additional compensation is required for this zone 4 delay, it should be negotiated as part of the deck coating item. It is Exxon's position that we negotiated and agreed on a fair price for the coating of the house which included compensation for all of the external factors that impacted the original work item.

036 CARGO TANK COATING

The schedule submitted with the bid package showed cargo tank coating commencing on day 6 of the contract. It was assumed that this would have allowed completion of in tank work in at least one of the five tanks originally scheduled prior to starting blasting. Northwest Marine's plan to blast and coat #5 center cargo tank bottom before working any of the steel, piping and associated staging was never approved or even discussed with the owner's representative. NMIW is correct in their assertion that Exxon objected to coating #5 center before completion of mechanical work. However, it was not because of additional steel work. The original bid specification contained a substantial amount of steel work in #5 center; a CVK insert (2 ea 20 ft staging towers), fractured repair at two web frame terminations (4 ea 15 ft staging platforms), repair of seven fractures on the fwd transverse bulkhead horizontal stiffeners. Exxon was aware that the fracture in the CVK mentioned above had progressed through the bulkhead into both bunker tanks and that there would be some growth in the repair of the CVK and BHD 60. We told Mr. Riddle and Mr. Lundmark of Northwest Marine about the need to repair the bunker tank bulkhead when they visited our west coast office prior to the bid award. We also discussed the bunker tank bulkhead repair with the ship's superintendent, Mr. Kunkel, on 13 June 1989 during their pre-arrival survey and on 19 June 1989 at the arrival conference with their trade foremen. We could not write up the repair of this problem because we had not yet been able to enter the bunker tank to complete a thorough survey. Although there was growth in steel and piping in #5 center tank, Exxon's objection to the "new" tank coating schedule was based on our feeling that the coating job would not be adequate unless all steel and pipe work was completed and all staging removed from the tank prior to starting the tank coating process. In order to help Northwest Marine complete the more essential tank coating work, Exxon cancelled the coating of #2 port aft and #2 starboard aft cargo tanks. We also authorized a specification change to apply the paint in a single coat with one stripe coat in lieu of two full coats and two stripe coats. In summary, it was Exxon's conclusion after having negotiated and agreed on the prices for the changes to this item in August, that our streamlining of the tank coating work had offset the delay and disruption caused by steel and piping changes and the increased deck blasting and coating. We feel that NMIW should consider the following factors in evaluating why there was an overrun on the tank coating item: problems with NMIW's large tank ventilation blower on startup caused a great deal of lost efficiency and delays; #2 ctr tank was blasted without adequate ventilation (due to blower failure) which required an extensive washdown of the tank after coating to remove blasting dust from the upper areas of the tank. Also, it appeared that early in the job (21-26 June) manpower was stretched very thin due to the ongoing work on the S.S. Aspen in drydock 4 and pierside. This may have prevented NMIW from completing steel and piping in a more timely manner in the tanks to be coated. Exxon feels that the cargo tank coating item was negotiated and the price agreed upon by both parties. We do not feel that any additional compensation is merited.

101 STEEL REPAIRS

We agree that there was significant additional steel work identified during the course of the Baton Rouge repair. However, NMIW's original schedule showed steel covering 19 of the 21 day repair period with a total price of \$920K for part I and II work. The actual dollars spent on steel was \$912K. We feel it is normal for a 20 year old vessel going through special survey #4 to have growth in tank fractures and clad welding of pits and eroded welds. Because of the expected steel growth, we wrote up extensive part II sections and kept the money for the part II steel work in

our budget. Exxon does not agree with most of the shipyard's reasoning for overruns on steel repairs. Growth in drydock critical steel work was simply not there. We have reviewed again the list of drydock critical steel provided to us in support of NMIW's 6/28/89 request for a drydock and contract extension. Under item 101, the major part of the work to be accomplished in drydock was to weld out as much of the longitudinal bulkhead between 3C and 3P as possible, this item was part I work. We also requested that a CVK insert in #2 center which was change order work be completed if at all possible. We had numerous discussions with the steel department and the ship's superintendent with regard to the welding of bottom pitting and eroded welds. Although this type of work is best done in drydock, we specifically told the steel people that this work was not required to be done in drydock and even provided an ABS approved welding procedure to do this work in the water.

There was some dilution of skilled personnel caused by the addition of items to replace the brine overboard shell penetration (item 219) and repair the main condenser overboard pipe (item 221). However, it is our opinion that these were small items which did not affect the overall schedule. Exxon did not witness a great deal of moving men and equipment as the shipyard has claimed. We did see a concentration on work against the shell in the drydock, but this is normal. These work assignments were made by NMIW, not by Exxon. On 6/30/89 we were finally able to agree with the yard on the major unresolved issues in the contract at that time: removal of the ship's bunkers, drydock critical steel work, and the undocking time. At that meeting, we told Mr. Eckelhoff to concentrate on the longitudinal bulkhead repair in #3 center, the CVK insert in #2 center and the piping shell penetrations. We also authorized the steel department to work 2 hour days in order to achieve the undocking time at Exxon's expense. During the 6/28-30 time frame we had many discussions with NMIW regarding the availability and quality of steel manpower. Our recollection of the problem was that the yard was unable to hire additional manpower for a short term job such as the Baton Rouge. Although we agree that NMIW appeared to reach the limits of its steel repair capability with available manpower, we feel that a large part of the problem may have been the ongoing work on the S.S. Aspen with major steel work to accomplish in drydock from 6/20-25. It appeared that steel manpower was very scarce during that time frame and the only jobs really worked with any effort were the bow damage (103) and the longitudinal bulkhead repairs in 3C-3P. We also would like to point out that NMIW took on an emergency steel repair of another vessel across the river during the Baton Rouge job. This was certainly unusual if they were really short on manpower. In conclusion, Exxon feels that Northwest Marine, especially the steel foremen who worked the job, Ron Hudson and Les Payne did an outstanding job covering the work identified. They worked very closely with our steel man, Ben Sheaffer, to minimize unnecessary moving of men and equipment and overall, our feeling was that the steel part of the job went very smoothly. When we negotiated the final invoice with NMIW, we agreed to prices for all of the change order work. It was our feeling at the end of our negotiations that although we had been very generous with our pricing of the change orders, we had done so to compensate Northwest Marine for the impact on the original work. At our last negotiating session, NMIW claimed that they required an additional \$27,400 to adequately compensate them for the steel items. Now they are asking for \$98,070 in additional compensation. This growth in the claim concerns us. As we stated, Exxon feels that we compensated Northwest Marine for impact on the original steel item in pricing the change order work. We do not feel that there is much validity to their claims of moving "men and equipment", growth in "owner requested drydock work" or losses of efficiency due to less skilled manpower. We are willing to discuss this item further with them, however Northwest Marine should be prepared to show Exxon in much greater detail exactly how our actions or inaction in running this job caused you to exceed your original budget by 44 percent.

102 MISCELLANEOUS HULL DAMAGE

This item was completed as written in the original bid specification with one change to enlarge the size of one insert from 24" X 48" to 36" X 48". Since Exxon feels that there was no overall work growth as stated in our general comments and there was also no overall steel growth in dollars spent compared to the original part I and II, we do not consider the claim for impact costs against this item to be valid.

103 HULL DAMAGE PROT BOW

Exxon disagrees with NMIW's claim that growth and the associated manpower shortage caused you to exceed your budget on this item. Our reasons are the same as stated above for item 102. Once again, the work was accomplished pretty much as written in the original specification, and this work area was outside of the deck blasting and coating area.

We feel that NMIW should look at the decision made within their steel department to remove, straighten and re-use all of the bulb plate transverse shell frames and the large bulb plate on the top of the bulwark. The boilermakers did an excellent job in accomplishing this work, however it was much more time consuming and therefore more expensive to complete the repairs in that manner. We also believe, as stated earlier that the ongoing work aboard the Aspen probably caused the yard to expend more overtime than normally required.

Exxon does not feel that the impact claim for this item warrants additional payment.

113 CARGO PIPING ON DECK

The deck piping hydrostatic test was completed on 6/21, most of the hydro test problems were with the piping in the tanks. Exxon does not feel that the pipe hydro had any affect on the deck cargo piping work.

We disagree with NMIW's claim that we delayed in putting work in hand which was known. As NMIW knows, we did a major rework of the deck cargo piping, replacing 14 of 19 dresser couplings on deck and in the process we discovered many washed out pipe ends which required replacement and clad welding. The repair change orders were issued as the defects were discovered so that NMIW could fit the work into the schedule as soon as possible. We feel that the amount and type of change order work should have been expected. That is why we had part II money in our budget. We estimate the overall growth in deck cargo piping to be 33 percent.

We feel that the yard may have underestimated the labor required to replace the 14 dresser couplings. Many of the renewals required breaking multiple flanges, removing interferences and crane service to move more than one section of pipe.

In the piping extras as with the steel extras, we used an O.T. man hour rate where required to price the change order work since our understanding was that we were paying that rate to compensate Northwest Marine for the fact that the change order work required them to work overtime. For the reasons stated above, we feel that no additional compensation for this item is required.

125 WT DOORS AND HATCHES

Exxon's position on this item is as stated previously; the overall growth on this job was not excessive, in fact Northwest Marine should have been prepared to accomplish the volume of work contained in parts I, II, and III in the original 21 day bid time.

Once again, we paid a premium for change order work on this item with the understanding that overtime had to be expended on the change order work so that the original item could be accomplished on straight time.

We do not feel that the impact on this item was significant and the growth of 12 percent is not excessive.

Exxon does not agree with NMIW's position regarding impact costs for this item.

131 DECK STEAM PIPE SUPPORTS
135 PIPE SUPPORTS ON DECK

Item 131: This was a fairly small item in the overall scope of work on deck and should have easily been worked into the schedule to avoid conflict with the deck blasting and coating. Most of the work on this item was done in the shop, fabricating and galvanizing the saddles under part II of the item.

We feel that their part II estimate to fabricate and install 10 saddles was low and is probably the source of the budget problem on this item.

We do not agree with NMIW's claim for additional payment for impact costs.

Item 135: This was also a fairly small item which the pipe personnel tended to put on the back burner until late in the job. That approach left few options in dealing with the interference with deck blasting and coating and probably resulted in excessive overtime charges.

We believe that this item is tied into the overall scope of piping work accomplished during the repair. As with the other items we paid premium prices for the change order work which was to compensate NMIW for impact on the original work.

Once again, we cannot see that an additional payment for impact is warranted.

145 UPPER DECK COATING

It is unfortunate that NMIW had to reschedule the deck coating so many times, however, things probably would have gone smoother if they had shared their scheduling ideas with Exxon. As I said previously, changes in schedules seemed to have been made in a vacuum.

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We immediately take issue with Northwest Marine's original production schedule. We saw the schedule in an unfinished condition during the first few days of the contract. It was not completed until 6/28/89, seven days after the start of work. The schedule is so vague regarding sequencing of the tank and void related work, steel, piping and coating that it is useless. It also shows blasting topside while in the drydock which usually is impractical due to grit contamination of the hull coating work and vice versa.

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We feel that throughout this document Northwest Marine has over stressed the lateness of some change order work. Most of the items issued after 7/12 were to document work already completed or to accomplish small, last minute emergency repairs.

TANK/VOID RELATED WORK PACKAGE:

Our comments regarding steel have been previously stated, there is nothing to add which is related to the impact analysis chart.

The cargo pump repairs became a critical item because the disassembly was deferred approximately 1 week while the machinists were working the S.S. Aspen.

We are surprised to see that the removal of the ship's bunkers and gas freeing of the port bunker tank are not shown as a critical item. Procrastination in finding a barge and misinformation regarding the acceptability of the sulfur content of the fuel caused a complete breakdown in the flow of work that depended on the bunker tank being gas free. Northwest Marine was very fortunate that Exxon's local agent found a barge company willing to store the oil while repairs were accomplished. NMIW also lost very little production time because of Exxon's insistence that NMIW get the ship off the drydock on time, 6/26, transfer the bunkers that day (a Sunday) and gas free the tank over the 4th of July holiday. Had we agreed to stay on the dock an additional three days as requested by NMIW, we would have lost two or three days of hot work.

DRYDOCK RELATED WORK PACKAGE:

We have nothing to add to our previously stated comments regarding the drydock work. We would like to stress that most of the "drydock critical" steel work was in the original specification and NMIW's work on the S.S. Aspen probably created more of a disruption than our change orders. Also, the need to get the ship off the drydock to transfer the bunkers, complete the steel repairs in #5 center, and re-load the bunkers to support lite off of the machinery far outweighed the steel superintendent's ideas regarding which steel work should be done prior to re-floating.

DECK AND HOUSE RELATED WORK PACKAGE:

As stated previously, the original schedule for the topside work appears unrealistic due to blasting and coating conflicts with drydock work. In fact, no topside or tank blasting was conducted while the vessel was in drydock. The schedule for the completion of the repairs was put together by the ship's superintendent, and our repair staff on 7/2 while waiting for the vessel to shift to the wet berth after coming out of drydock.

The final items to complete on deck were the paint, the cargo and ballast pumps, and the steam pipe lagging. The lagging was an optional item which we were working on time and material to get as much as possible accomplished. The pumps were original bid specification items which got pushed back by work on the cans and the high workload on the machinists during the first week of the contract. The paint has previously been discussed.

The deck work package was definitely the critical path. We tried, as stated earlier, to ease the impact of the many changes by reducing the work scope of a number of items. In hindsight, the

zone concept was good, and the prevailing winds really kept the deck blasting interference down to a minimum, but the other deck and tank work probably could have been accomplished more efficiently if it had also been packaged in zones.

Most of the other items NMIW claims as impacting the work in this package have been previously discussed except we would like to point out again that they are over stressing the late changes (7/15 and 7/16). The deck hydraulic piping item was an emergency blowout which occurred on startup and the upper deck and house coating changes were to document work previously authorized.

LIGHT OFF RELATED WORK PACKAGE:

Exxon felt that Northwest Marine made an excellent effort to complete the machinery work prior to light off. In fact, light off was achieved on July 9th.

We have noted that asbestos removal is not included here. A great deal of time was lost early in the contract due to asbestos shutdowns of the machinery space work. Even though samples of the insulation were taken during the pre-shipyards survey, adequate precautions were not taken to prevent damage to the turbine insulation. Asbestos was much more of a factor than any action or inaction by Exxon.

Another major problem was the high workload on the machinists due to work on the Aspen during the first week of the job. All engineroom pump work was deferred until the drydocking. This probably caused inefficiency and excessive overtime.

The valve shop became overloaded during the drydocking phase of the job also. We agree that there were some additional valves to be overhauled, but we paid premium prices for that work because of the impact.

Exxon made every effort to authorize work as soon as it was identified. Many of these machinery items could not be written until the pump or valve was opened for inspection.

HABITABILITY RELATED WORK PACKAGE:

We have nothing to add regarding this part of the job.

January 17, 1990

MEMO

TO: Mr. H. P. Leyendecker
FROM: S. M. Day
SUBJECT: EXXON BATON ROUGE SHIPYARD REPAIR
AT NMIW JUNE-JULY 1989

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After reviewing the impact documentation provided by Northwest Marine Iron Works dated 12/11/89, I offer my comments and observations regarding the repair of the Exxon Baton Rouge.

GENERAL COMMENTS:

Exxon was very pleased with the final outcome of the Baton Rouge repair. Both the contract inspectors and I felt that overall, Northwest Marine made an outstanding effort to complete all of the work identified as quickly as possible. There were a few rough spots during the course of the repair and some work which was very difficult to schedule without conflict. However, virtually all of the work was completed and the vessel is now in much better condition than when it arrived at NMIW.

First, I would like to comment on the scope of work contained in the bid specification compared to the volume of work actually accomplished. The total of the original part I, II, and III was \$4,925,878. The agreed total for work done on the Baton Rouge is \$3,802,458 as of this date. This amount is only 4% greater than the original part I bid amount and even if your total outstanding claim of \$479,178 is added to the agreed total, the amount is still substantially less than the part I, II, and III sum.

Exxon's bid letter to NMIW contained the following instructions regarding the calculation of the total repair days: "...should you feel that the items included in part II, part III, etc. will, in fact affect total repair time, please identify such items and the extent to which the repair period will be increased.". Since the bid contained no exceptions to the part II and III work, it was our conclusion that Northwest Marine was capable of accomplishing all of the work in the bid specification in 22 days. This conclusion should be kept in mind as NMIW is reading our comments regarding the amount of growth in work scope which has been claimed.

001 SERVICES

Exxon does not agree that the job growth on the Exxon Baton Rouge was inordinate. The bid price for services should have allowed for services to cover all of the work, (\$4.9M), contained in the bid specification. Northwest Marine has already been paid \$33K for four extra days of services and we are still negotiating with them regarding an additional \$46K for the remaining 5 days of services provided they were in excess of the original 21 day repair period. It is Exxon's position that the final price which we agree upon for field order number 337 "wet berth extra days" is the only additional compensation justified.

034 HOUSE COATING

We agree with most of their comments regarding the house coating. We did run out of paint and that caused a loss of efficiency. We did have to wash down the house once to re-start the painting and again because of boiler light off. We also agree that NMIW had to set up and tear

down equipment and re-mask some doors. However, our review of the breakdown of the agreed price for item 34-B (F.O. 277) shows that we negotiated and agreed on compensation for the wash down prior to re-starting the painting, an additional washdown the following morning because of soot and the delay and disruption of the original work item due to running out of owner furnished paint. Although we discussed the effect of the house coating delay on the coating of the deck in zone 4, we are not convinced that there actually was a delay. If Northwest Marine contends that additional compensation is required for this zone 4 delay, it should be negotiated as part of the deck coating item. It is Exxon's position that we negotiated and agreed on a fair price for the coating of the house which included compensation for all of the external factors that impacted the original work item.

036 CARGO TANK COATING

The schedule submitted with the bid package showed cargo tank coating commencing on day 6 of the contract. It was assumed that this would have allowed completion of in tank work in at least one of the five tanks originally scheduled prior to starting blasting. Northwest Marine's plan to blast and coat #5 center cargo tank bottom before working any of the steel, piping and associated staging was never approved or even discussed with the owner's representative. NMIW is correct in their assertion that Exxon objected to coating #5 center before completion of mechanical work. However, it was not because of additional steel work. The original bid specification contained a substantial amount of steel work in #5 center; a CVK insert (2 ea 20 ft staging towers), fractured repair at two web frame terminations (4 ea 15 ft staging platforms), repair of seven fractures on the fwd transverse bulkhead horizontal stiffeners. Exxon was aware that the fracture in the CVK mentioned above had progressed through the bulkhead into both bunker tanks and that there would be some growth in the repair of the CVK and BHD 60. We told Mr. Riddle and Mr. Lundmark of Northwest Marine about the need to repair the bunker tank bulkhead when they visited our west coast office prior to the bid award. We also discussed the bunker tank bulkhead repair with the ship's superintendent, Mr. Kunkel, on 13 June 1989 during their pre-arrival survey and on 19 June 1989 at the arrival conference with their trade foremen. We could not write up the repair of this problem because we had not yet been able to enter the bunker tank to complete a thorough survey. Although there was growth in steel and piping in #5 center tank, Exxon's objection to the "new" tank coating schedule was based on our feeling that the coating job would not be adequate unless all steel and pipe work was completed and all staging removed from the tank prior to starting the tank coating process. In order to help Northwest Marine complete the more essential tank coating work, Exxon cancelled the coating of #2 port aft and #2 starboard aft cargo tanks. We also authorized a specification change to apply the paint in a single coat with one stripe coat in lieu of two full coats and two stripe coats. In summary, it was Exxon's conclusion after having negotiated and agreed on the prices for the changes to this item in August, that our streamlining of the tank coating work had offset the delay and disruption caused by steel and piping changes and the increased deck blasting and coating. We feel that NMIW should consider the following factors in evaluating why there was an overrun on the tank coating item: problems with NMIW's large tank ventilation blower on startup caused a great deal of lost efficiency and delays; #2 ctr tank was blasted without adequate ventilation (due to blower failure) which required an extensive washdown of the tank after coating to remove blasting dust from the upper areas of the tank. Also, it appeared that early in the job (21-26 June) manpower was stretched very thin due to the ongoing work on the S.S. Aspen in drydock 4 and pierside. This may have prevented NMIW from completing steel and piping in a more timely manner in the tanks to be coated. Exxon feels that the cargo tank coating item was negotiated and the price agreed upon by both parties. We do not feel that any additional compensation is merited.

101 STEEL REPAIRS

We agree that there was significant additional steel work identified during the course of the Baton Rouge repair. However, NMIW's original schedule showed steel covering 19 of the 21 day repair period with a total price of \$920K for part I and II work. The actual dollars spent on steel was \$912K. We feel it is normal for a 20 year old vessel going through special survey #4 to have growth in tank fractures and clad welding of pits and eroded welds. Because of the expected steel growth, we wrote up extensive part II sections and kept the money for the part II steel work in

our budget. Exxon does not agree with most of the shipyard's reasoning for overruns on steel repairs. Growth in drydock critical steel work was simply not there. We have reviewed again the list of drydock critical steel provided to us in support of NMIW's 6/28/89 request for a drydock and contract extension. Under item 101, the major part of the work to be accomplished in drydock was to weld out as much of the longitudinal bulkhead between 3C and 3P as possible, this item was part I work. We also requested that a CVK insert in #2 center which was change order work be completed if at all possible. We had numerous discussions with the steel department and the ship's superintendent with regard to the welding of bottom pitting and eroded welds. Although this type of work is best done in drydock, we specifically told the steel people that this work was not required to be done in drydock and even provided an ABS approved welding procedure to do this work in the water.

There was some dilution of skilled personnel caused by the addition of items to replace the brine overboard shell penetration (item 219) and repair the main condenser overboard pipe (item 221). However, it is our opinion that these were small items which did not affect the overall schedule. Exxon did not witness a great deal of moving men and equipment as the shipyard has claimed. We did see a concentration on work against the shell in the drydock, but this is normal. These work assignments were made by NMIW, not by Exxon. On 6/30/89 we were finally able to agree with the yard on the major unresolved issues in the contract at that time: removal of the ship's bunkers, drydock critical steel work, and the undocking time. At that meeting, we told Mr. Eckelhoff to concentrate on the longitudinal bulkhead repair in #3 center, the CVK insert in #2 center and the piping shell penetrations. We also authorized the steel department to work 2 hour days in order to achieve the undocking time at Exxon's expense. During the 6/28-30 time frame we had many discussions with NMIW regarding the availability and quality of steel manpower. Our recollection of the problem was that the yard was unable to hire additional manpower for a short term job such as the Baton Rouge. Although we agree that NMIW appeared to reach the limits of its steel repair capability with available manpower, we feel that a large part of the problem may have been the ongoing work on the S.S. Aspen with major steel work to accomplish in drydock from 6/20-25. It appeared that steel manpower was very scarce during that time frame and the only jobs really worked with any effort were the bow damage (103) and the longitudinal bulkhead repairs in 3C-3P. We also would like to point out that NMIW took on an emergency steel repair of another vessel across the river during the Baton Rouge job. This was certainly unusual if they were really short on manpower. In conclusion, Exxon feels that Northwest Marine, especially the steel foremen who worked the job, Ron Hudson and Les Payne did an outstanding job covering the work identified. They worked very closely with our steel man, Ben Sheaffer, to minimize unnecessary moving of men and equipment and overall, our feeling was that the steel part of the job went very smoothly. When we negotiated the final invoice with NMIW, we agreed to prices for all of the change order work. It was our feeling at the end of our negotiations that although we had been very generous with our pricing of the change orders, we had done so to compensate Northwest Marine for the impact on the original work. At our last negotiating session, NMIW claimed that they required an additional \$27,400 to adequately compensate them for the steel items. Now they are asking for \$98,070 in additional compensation. This growth in the claim concerns us. As we stated, Exxon feels that we compensated Northwest Marine for impact on the original steel item in pricing the change order work. We do not feel that there is much validity to their claims of moving "men and equipment", growth in "owner requested drydock work" or losses of efficiency due to less skilled manpower. We are willing to discuss this item further with them, however Northwest Marine should be prepared to show Exxon in much greater detail exactly how our actions or inaction in running this job caused you to exceed your original budget by 44 percent.

102 MISCELLANEOUS HULL DAMAGE

This item was completed as written in the original bid specification with one change to enlarge the size of one insert from 24" X 48" to 36" X 48". Since Exxon feels that there was no overall work growth as stated in our general comments and there was also no overall steel growth in dollars spent compared to the original part I and II, we do not consider the claim for impact costs against this item to be valid.

103 HULL DAMAGE PROT BOW

Exxon disagrees with NMIW's claim that growth and the associated manpower shortage caused you to exceed your budget on this item. Our reasons are the same as stated above for item 102. Once again, the work was accomplished pretty much as written in the original specification, and this work area was outside of the deck blasting and coating area.

We feel that NMIW should look at the decision made within their steel department to remove, straighten and re-use all of the bulb plate transverse shell frames and the large bulb plate on the top of the bulwark. The boilermakers did an excellent job in accomplishing this work, however it was much more time consuming and therefore more expensive to complete the repairs in that manner. We also believe, as stated earlier that the ongoing work aboard the Aspen probably caused the yard to expend more overtime than normally required.

Exxon does not feel that the impact claim for this item warrants additional payment.

113 CARGO PIPING ON DECK

The deck piping hydrostatic test was completed on 6/21, most of the hydro test problems were with the piping in the tanks. Exxon does not feel that the pipe hydro had any affect on the deck cargo piping work.

We disagree with NMIW's claim that we delayed in putting work in hand which was known. As NMIW knows, we did a major rework of the deck cargo piping, replacing 14 of 19 dresser couplings on deck and in the process we discovered many washed out pipe ends which required replacement and clad welding. The repair change orders were issued as the defects were discovered so that NMIW could fit the work into the schedule as soon as possible. We feel that the amount and type of change order work should have been expected. That is why we had part II money in our budget. We estimate the overall growth in deck cargo piping to be 33 percent.

We feel that the yard may have underestimated the labor required to replace the 14 dresser couplings. Many of the renewals required breaking multiple flanges, removing interferences and crane service to move more than one section of pipe.

In the piping extras as with the steel extras, we used an O.T. man hour rate where required to price the change order work since our understanding was that we were paying that rate to compensate Northwest Marine for the fact that the change order work required them to work overtime. For the reasons stated above, we feel that no additional compensation for this item is required.

125 WT DOORS AND HATCHES

Exxon's position on this item is as stated previously; the overall growth on this job was not excessive, in fact Northwest Marine should have been prepared to accomplish the volume of work contained in parts I, II, and III in the original 21 day bid time.

Once again, we paid a premium for change order work on this item with the understanding that overtime had to be expended on the change order work so that the original item could be accomplished on straight time.

We do not feel that the impact on this item was significant and the growth of 12 percent is not excessive.

Exxon does not agree with NMIW's position regarding impact costs for this item.

131 DECK STEAM PIPE SUPPORTS
135 PIPE SUPPORTS ON DECK

Item 131: This was a fairly small item in the overall scope of work on deck and should have easily been worked into the schedule to avoid conflict with the deck blasting and coating. Most of the work on this item was done in the shop, fabricating and galvanizing the saddles under part II of the item.

We feel that their part II estimate to fabricate and install 10 saddles was low and is probably the source of the budget problem on this item.

We do not agree with NMIW's claim for additional payment for impact costs.

Item 135: This was also a fairly small item which the pipe personnel tended to put on the back burner until late in the job. That approach left few options in dealing with the interference with deck blasting and coating and probably resulted in excessive overtime charges.

We believe that this item is tied into the overall scope of piping work accomplished during the repair. As with the other items we paid premium prices for the change order work which was to compensate NMIW for impact on the original work.

Once again, we cannot see that an additional payment for impact is warranted.

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Our comments regarding steel have been previously stated, there is nothing to add which is related to the impact analysis chart.

The cargo pump repairs became a critical item because the disassembly was deferred approximately 1 week while the machinists were working the S.S. Aspen.

We are surprised to see that the removal of the ship's bunkers and gas freeing of the port bunker tank are not shown as a critical item. Procrastination in finding a barge and misinformation regarding the acceptability of the sulfur content of the fuel caused a complete breakdown in the flow of work that depended on the bunker tank being gas free. Northwest Marine was very fortunate that Exxon's local agent found a barge company willing to store the oil while repairs were accomplished. NMIW also lost very little production time because of Exxon's insistence that NMIW get the ship off the drydock on time, 6/26, transfer the bunkers that day (a Sunday) and gas free the tank over the 4th of July holiday. Had we agreed to stay on the dock an additional three days as requested by NMIW, we would have lost two or three days of hot work.

DRYDOCK RELATED WORK PACKAGE:

We have nothing to add to our previously stated comments regarding the drydock work. We would like to stress that most of the "drydock critical" steel work was in the original specification and NMIW's work on the S.S. Aspen probably created more of a disruption than our change orders. Also, the need to get the ship off the drydock to transfer the bunkers, complete the steel repairs in #5 center, and re-load the bunkers to support lite off of the machinery far outweighed the steel superintendent's ideas regarding which steel work should be done prior to re-floating.

DECK AND HOUSE RELATED WORK PACKAGE:

As stated previously, the original schedule for the topside work appears unrealistic due to blasting and coating conflicts with drydock work. In fact, no topside or tank blasting was conducted while the vessel was in drydock. The schedule for the completion of the repairs was put together by the ship's superintendent, and our repair staff on 7/2 while waiting for the vessel to shift to the wet berth after coming out of drydock.

The final items to complete on deck were the paint, the cargo and ballast pumps, and the steam pipe lagging. The lagging was an optional item which we were working on time and material to get as much as possible accomplished. The pumps were original bid specification items which got pushed back by work on the cans and the high workload on the machinists during the first week of the contract. The paint has previously been discussed.

The deck work package was definitely the critical path. We tried, as stated earlier, to ease the impact of the many changes by reducing the work scope of a number of items. In hindsight, the

zone concept was good, and the prevailing winds really kept the deck blasting interference down to a minimum, but the other deck and tank work probably could have been accomplished more efficiently if it had also been packaged in zones.

Most of the other items NMIW claims as impacting the work in this package have been previously discussed except we would like to point out again that they are over stressing the late changes (7/15 and 7/16). The deck hydraulic piping item was an emergency blowout which occurred on startup and the upper deck and house coating changes were to document work previously authorized.

LIGHT OFF RELATED WORK PACKAGE:

Exxon felt that Northwest Marine made an excellent effort to complete the machinery work prior to light off. In fact, light off was achieved on July 9th.

We have noted that asbestos removal is not included here. A great deal of time was lost early in the contract due to asbestos shutdowns of the machinery space work. Even though samples of the insulation were taken during the pre-shipyard survey, adequate precautions were not taken to prevent damage to the turbine insulation. Asbestos was much more of a factor than any action or inaction by Exxon.

Another major problem was the high workload on the machinists due to work on the Aspen during the first week of the job. All engineroom pump work was deferred until the drydocking. This probably caused inefficiency and excessive overtime.

The valve shop became overloaded during the drydocking phase of the job also. We agree that there were some additional valves to be overhauled, but we paid premium prices for that work because of the impact.

Exxon made every effort to authorize work as soon as it was identified. Many of these machinery items could not be written until the pump or valve was opened for inspection.

HABITABILITY RELATED WORK PACKAGE:

We have nothing to add regarding this part of the job.

EXXON SHIPPING COMPANY

POST OFFICE BOX 1512 • HOUSTON, TEXAS 77251-1512 "EXXSHIP HOUSTON"

J. A. TOMPKINS
FLEET SERVICES MANAGER

February 2, 1990

EXXON BATON ROUGE
Shipyard Repair
Unresolved ItemsMr. William H. Zavín, II
Northwest Marine Iron Works
5555 N. Channel Avenue, Bldg. 2
Portland, Oregon 97217

Dear Sir:

After reviewing your letter 12/11/89 and Steve Day's memo 1/17/90, it is of great concern that Northwest Marine Iron Works would put in such a claim for additional compensation. During the negotiations concluded on 8/1/89, it was our understanding that your representative was endeavoring to reach a just and final settlement on all the items and at the conclusion of the negotiations, there remained only four (4) outstanding items. On October 3, 1989, I received the first notice that you were looking for additional compensation for items supposedly settled as well as those that were not settled. It is very disappointing to us that you would try to reopen items that were considered to be settled since each item should have been discussed thoroughly and a fair price agreed to during the discussions. If you did not feel the prices were fair, you should not have agreed to them during the August meeting. Your approach defeats the entire purpose of fixed price agreements in our opinion and hopefully will not happen again in the future.

In order to settle the matter, we are willing to pay the \$63,021 you are requesting for the four (4) outstanding items. Aside from this amount, we do not feel you are entitled to the additional \$416,157 for "Impact Costs".

After your review of Steve Day's attached memo, we hope you come to the same conclusion as ours and the matter can be put to rest.

If you have any questions or wish to discuss further, do not hesitate to call.

Very truly yours,


H. P. LeyendeckerHPL:lc
Attachment

1683x


cc: Mr. S. M. Day
Mr. J. A. Tompkins

NWMAR130831

02/06/1990 14:16 FROM EXXON SHIPPING CO HOUSTON TO NMI

P.03

MEMORANDUM

| | |
|---|---|
| TO: | SUBJECT: |
| MR. H. P. LEYENDECKER | EXXON BATON ROUGE SHIPYARD REPAIR AT NMIW JUNE-JULY 1989 |
| FROM: | DATE: |
| S. M. DAY  | JANUARY 17, 1990 |

AFTER REVIEWING THE IMPACT DOCUMENTATION PROVIDED BY NORTHWEST MARINE IRON WORKS DATED 12/11/89. I OFFER MY COMMENTS AND OBSERVATIONS REGARDING THE REPAIR OF THE EXXON BATON ROUGE.

GENERAL COMMENTS:

EXXON WAS VERY PLEASED WITH THE FINAL OUTCOME OF THE BATON ROUGE REPAIR. BOTH THE CONTRACT INSPECTORS AND I FELT THAT OVERALL, NORTHWEST MARINE MADE AN OUTSTANDING EFFORT TO COMPLETE ALL OF THE WORK IDENTIFIED AS QUICKLY AS POSSIBLE. THERE WERE A FEW ROUGH SPOTS DURING THE COURSE OF THE REPAIR AND SOME WORK WHICH WAS VERY DIFFICULT TO SCHEDULE WITHOUT CONFLICT. HOWEVER, VIRTUALLY ALL OF THE WORK WAS COMPLETED AND THE VESSEL IS NOW IN MUCH BETTER CONDITION THAN WHEN IT ARRIVED AT NMIW.

FIRST, I WOULD LIKE TO COMMENT ON THE SCOPE OF WORK CONTAINED IN THE BID SPECIFICATION COMPARED TO THE VOLUME OF WORK ACTUALLY ACCOMPLISHED. THE TOTAL OF THE ORIGINAL PART I, II, AND III WAS \$4,925,878. THE AGREED TOTAL FOR WORK DONE ON THE BATON ROUGE IS \$3,802,458 AS OF THIS DATE. THIS AMOUNT IS ONLY 4% GREATER THAN THE ORIGINAL PART I BID AMOUNT AND EVEN IF YOUR TOTAL OUTSTANDING CLAIM OF \$479,178 IS ADDED TO THE AGREED TOTAL, THE AMOUNT IS STILL SUBSTANTIALLY LESS THAN THE PART I, II, AND III SUM.

EXXON'S BID LETTER TO NMIW CONTAINED THE FOLLOWING INSTRUCTIONS REGARDING THE CALCULATION OF THE TOTAL REPAIR DAYS: "...SHOULD YOU FEEL THAT THE ITEMS INCLUDED IN PART II, PART III, ETC. WILL, IN FACT AFFECT TOTAL REPAIR TIME, PLEASE IDENTIFY SUCH ITEMS AND THE EXTENT TO WHICH THE REPAIR PERIOD WILL BE INCREASED.". SINCE THE BID CONTAINED NO EXCEPTIONS TO THE PART II AND III WORK, IT WAS OUR CONCLUSION THAT NORTHWEST MARINE WAS CAPABLE OF ACCOMPLISHING ALL OF THE WORK IN THE BID SPECIFICATION IN 22 DAYS. THIS CONCLUSION SHOULD BE KEPT IN MIND AS NMIW IS READING OUR COMMENTS REGARDING THE AMOUNT OF GROWTH IN WORK SCOPE WHICH HAS BEEN CLAIMED.

001 SERVICES

EXXON DOES NOT AGREE THAT THE JOB GROWTH ON THE EXXON BATON ROUGE WAS INORDINATE. THE BID PRICE FOR SERVICES SHOULD HAVE ALLOWED FOR SERVICES TO COVER ALL OF THE WORK, (\$4.9M), CONTAINED IN THE BID SPECIFICATION. NORTHWEST MARINE HAS ALREADY BEEN PAID \$33K FOR FOUR EXTRA DAYS OF SERVICES AND WE ARE STILL NEGOTIATING WITH THEM REGARDING AN ADDITIONAL \$46K FOR THE REMAINING 5 DAYS OF SERVICES PROVIDED THEY WERE IN EXCESS OF THE ORIGINAL 21 DAY REPAIR PERIOD. IT IS EXXON'S POSITION THAT THE FINAL PRICE WHICH WE AGREE UPON FOR FIELD ORDER NUMBER 337 "WET BERTH EXTRA DAYS" IS THE ONLY ADDITIONAL COMPENSATION JUSTIFIED.

02/06/1990 14:17 FROM EXXON SHIPPING CO HOUSTON TO NMI

P.04

034 HOUSE COATING

WE AGREE WITH MOST OF THEIR COMMENTS REGARDING THE HOUSE COATING. WE DID RUN OUT OF PAINT AND THAT CAUSED A LOSS OF EFFICIENCY. WE DID HAVE TO WASH DOWN THE HOUSE ONCE TO RE-START THE PAINTING AND AGAIN BECAUSE OF BOILER LIGHT OFF. WE ALSO AGREE THAT NMIW HAD TO SET UP AND TEAR DOWN EQUIPMENT AND RE-MASK SOME DOORS. HOWEVER, OUR REVIEW OF THE BREAKDOWN OF THE AGREED PRICE FOR ITEM 34-B (F.O. 277) SHOWS THAT WE NEGOTIATED AND AGREED ON COMPENSATION FOR THE WASH DOWN PRIOR TO RE-STARTING THE PAINTING, AN ADDITIONAL WASHDOWN THE FOLLOWING MORNING BECAUSE OF SOOT AND THE DELAY AND DISRUPTION OF THE ORIGINAL WORK ITEM DUE TO RUNNING OUT OF OWNER FURNISHED PAINT. ALTHOUGH WE DISCUSSED THE EFFECT OF THE HOUSE COATING DELAY ON THE COATING OF THE DECK IN ZONE 4, WE ARE NOT CONVINCED THAT THERE ACTUALLY WAS A DELAY. IF NORTHWEST MARINE CONTENDS THAT ADDITIONAL COMPENSATION IS REQUIRED FOR THIS ZONE 4 DELAY, IT SHOULD BE NEGOTIATED AS PART OF THE DECK COATING ITEM. IT IS EXXON'S POSITION THAT WE NEGOTIATED AND AGREED ON A FAIR PRICE FOR THE COATING OF THE HOUSE WHICH INCLUDED COMPENSATION FOR ALL OF THE EXTERNAL FACTORS THAT IMPACTED THE ORIGINAL WORK ITEM.

036 CARGO TANK COATING

THE SCHEDULE SUBMITTED WITH THE BID PACKAGE SHOWED CARGO TANK COATING COMMENCING ON DAY 6 OF THE CONTRACT. IT WAS ASSUMED THAT THIS WOULD HAVE ALLOWED COMPLETION OF IN TANK WORK IN AT LEAST ONE OF THE FIVE TANKS ORIGINALLY SCHEDULED PRIOR TO STARTING BLASTING. NORTHWEST MARINE'S PLAN TO BLAST AND COAT #5 CENTER CARGO TANK BOTTOM BEFORE WORKING ANY OF THE STEEL, PIPING AND ASSOCIATED STAGING WAS NEVER APPROVED OR EVEN DISCUSSED WITH THE OWNER'S REPRESENTATIVE. NMIW IS CORRECT IN THEIR ASSERTION THAT EXXON OBJECTED TO COATING #5 CENTER BEFORE COMPLETION OF MECHANICAL WORK. HOWEVER, IT WAS NOT BECAUSE OF ADDITIONAL STEEL WORK. THE ORIGINAL BID SPECIFICATION CONTAINED A SUBSTANTIAL AMOUNT OF STEEL WORK IN #5 CENTER; A CVK INSERT (2 EA 20 FT STAGING TOWERS), FRACTURE REPAIR AT TWO WEB FRAME TERMINATIONS (4 EA 15 FT STAGING PLATFORMS), REPAIR OF SEVEN FRACTURES ON THE FWD TRANSVERSE BULKHEAD HORIZONTAL STIFFENERS. EXXON WAS AWARE THAT THE FRACTURE IN THE CVK MENTIONED ABOVE HAD PROGRESSED THROUGH THE BULKHEAD INTO BOTH BUNKER TANKS AND THAT THERE WOULD BE SOME GROWTH IN THE REPAIR OF THE CVK AND BHD 60. WE TOLD MR. RIDDLE AND MR. LUNDMARK OF NORTHWEST MARINE ABOUT THE NEED TO REPAIR THE BUNKER TANK BULKHEAD WHEN THEY VISITED OUR WEST COAST OFFICE PRIOR TO THE BID AWARD. WE ALSO DISCUSSED THE BUNKER TANK BULKHEAD REPAIR WITH THE SHIP'S SUPERINTENDENT, MR. KUNKEL, ON 13 JUNE 1989 DURING THEIR PRE-ARRIVAL SURVEY AND ON 19 JUNE 1989 AT THE ARRIVAL CONFERENCE WITH THEIR TRADE FOREMEN. WE COULD NOT WRITE UP THE REPAIR OF THIS PROBLEM BECAUSE WE HAD NOT YET BEEN ABLE TO ENTER THE BUNKER TANK TO COMPLETE A THOROUGH SURVEY. ALTHOUGH THERE WAS GROWTH IN STEEL AND PIPING IN #5 CENTER TANK, EXXON'S OBJECTION TO THE "NEW" TANK COATING SCHEDULE WAS BASED ON OUR FEELING THAT THE COATING JOB WOULD NOT BE ADEQUATE UNLESS ALL STEEL AND PIPE WORK WAS COMPLETED AND ALL STAGING REMOVED FROM THE TANK PRIOR TO STARTING THE TANK COATING PROCESS. IN ORDER TO HELP NORTHWEST MARINE COMPLETE THE MORE ESSENTIAL TANK COATING WORK, EXXON CANCELLED THE COATING OF #2 PORT AFT AND #2 STARBOARD AFT CARGO TANKS. WE ALSO AUTHORIZED A SPECIFICATION CHANGE TO APPLY THE PAINT IN A SINGLE COAT WITH ONE STRIPE COAT IN LIEU OF TWO FULL COATS AND TWO STRIPE COATS. IN SUMMARY, IT WAS EXXON'S CONCLUSION AFTER HAVING NEGOTIATED AND AGREED ON THE PRICES FOR THE CHANGES TO THIS ITEM IN AUGUST, THAT OUR STREAMLINING OF THE TANK COATING WORK HAD OFFSET THE DELAY AND DISRUPTION CAUSED BY STEEL AND

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P.05

PIPING CHANGES AND THE INCREASED DECK BLASTING AND COATING. WE FEEL THAT NMIW SHOULD CONSIDER THE FOLLOWING FACTORS IN EVALUATING WHY THERE WAS AN OVERRUN ON THE TANK COATING ITEM: PROBLEMS WITH NMIW'S LARGE TANK VENTILATION BLOWER ON STARTUP CAUSED A GREAT DEAL OF LOST EFFICIENCY AND DELAYS; #2 CTR TANK WAS BLASTED WITHOUT ADEQUATE VENTILATION (DUE TO BLOWER FAILURE) WHICH REQUIRED AN EXTENSIVE WASHDOWN OF THE TANK AFTER COATING TO REMOVE BLASTING DUST FROM THE UPPER AREAS OF THE TANK. ALSO, IT APPEARED THAT EARLY IN THE JOB (21-26 JUNE) MANPOWER WAS STRETCHED VERY THIN DUE TO THE ONGOING WORK ON THE S.S. ASPEN IN DRYDOCK 4 AND PIERSIDE. THIS MAY HAVE PREVENTED NMIW FROM COMPLETING STEEL AND PIPING IN A MORE TIMELY MANNER IN THE TANKS TO BE COATED. EXXON FEELS THAT THE CARGO TANK COATING ITEM WAS NEGOTIATED AND THE PRICE AGREED UPON BY BOTH PARTIES. WE DO NOT FEEL THAT ANY ADDITIONAL COMPENSATION IS MERITED.

101 - STEEL REPAIRS

WE AGREE THAT THERE WAS SIGNIFICANT ADDITIONAL STEEL WORK IDENTIFIED DURING THE COURSE OF THE BATON ROUGE REPAIR. HOWEVER, NMIW'S ORIGINAL SCHEDULED SHOWED STEEL COVERING 19 OF THE 21 DAY REPAIR PERIOD WITH A TOTAL PRICE OF \$920K FOR PART I AND II WORK. THE ACTUAL DOLLARS SPENT ON STEEL WAS \$912K. WE FEEL IT IS NORMAL FOR A 20 YEAR OLD VESSEL GOING THROUGH SPECIAL SURVEY #4 TO HAVE GROWTH IN TANK FRACTURES AND CLAD WELDING OF PITS AND ERODED WELDS. BECAUSE OF THE EXPECTED STEEL GROWTH, WE WROTE UP EXTENSIVE PART II SECTIONS AND KEPT THE MONEY FOR THE PART II STEEL WORK IN OUR BUDGET. EXXON DOES NOT AGREE WITH MOST OF THE SHIPYARD'S REASONING FOR OVERRUNS ON STEEL REPAIRS. GROWTH IN DRYDOCK CRITICAL STEEL WORK WAS SIMPLY NOT THERE. WE HAVE REVIEWED AGAIN THE LIST OF DRYDOCK CRITICAL STEEL PROVIDED TO US IN SUPPORT OF NMIW'S 6/28/89 REQUEST FOR A DRYDOCK AND CONTRACT EXTENSION. UNDER ITEM 101, THE MAJOR PART OF THE WORK TO BE ACCOMPLISHED IN DRYDOCK WAS TO WELD OUT AS MUCH OF THE LONGITUDINAL BULKHEAD BETWEEN 3C AND 3P AS POSSIBLE, THIS ITEM WAS PART I WORK. WE ALSO REQUESTED THAT A CVK INSERT IN #2 CENTER WHICH WAS CHANGE ORDER WORK BE COMPLETED IF AT ALL POSSIBLE. WE HAD NUMEROUS DISCUSSIONS WITH THE STEEL DEPARTMENT AND THE SHIP'S SUPERINTENDENT WITH REGARD TO THE WELDING OF BOTTOM PITTING AND ERODED WELDS. ALTHOUGH THIS TYPE OF WORK IS BEST DONE IN DRYDOCK, WE SPECIFICALLY TOLD THE STEEL PEOPLE THAT THIS WORK WAS NOT REQUIRED TO BE DONE IN DRYDOCK AND EVEN PROVIDED AN ABS APPROVED WELDING PROCEDURE TO DO THIS WORK IN THE WATER.

THERE WAS SOME DILUTION OF SKILLED PERSONNEL CAUSED BY THE ADDITION OF ITEMS TO REPLACE THE BRINE OVERBOARD SHELL PENETRATION (ITEM 219) AND REPAIR THE MAIN CONDENSER OVERBOARD PIPE (ITEM 221). HOWEVER, IT IS OUR OPINION THAT THESE WERE SMALL ITEMS WHICH DID NOT AFFECT THE OVERALL SCHEDULE. EXXON DID NOT WITNESS A GREAT DEAL OF MOVING MEN AND EQUIPMENT AS THE SHIPYARD HAS CLAIMED. WE DID SEE A CONCENTRATION ON WORK AGAINST THE SHELL IN THE DRYDOCK, BUT THIS IS NORMAL. THESE WORK ASSIGNMENTS WERE MADE BY NMIW, NOT BY EXXON. ON 6/30/89 WE WERE FINALLY ABLE TO AGREE WITH THE YARD ON THE MAJOR UNRESOLVED ISSUES IN THE CONTRACT AT THAT TIME: REMOVAL OF THE SHIP'S BUNKERS, DRYDOCK CRITICAL STEEL WORK, AND THE UNDOCKING TIME. AT THAT MEETING, WE TOLD MR. ECKELHOFF TO CONCENTRATE ON THE LONGITUDINAL BULKHEAD REPAIR IN #3 CENTER, THE CVK INSERT IN #2 CENTER AND THE PIPING SHELL PENETRATIONS. WE ALSO AUTHORIZED THE STEEL DEPARTMENT TO WORK 12 HOUR DAYS IN ORDER TO ACHIEVE THE UNDOCKING TIME AT EXXON'S EXPENSE. DURING THE 6/28-30 TIME FRAME WE HAD MANY DISCUSSIONS WITH NMIW REGARDING THE AVAILABILITY AND QUALITY OF STEEL MANPOWER. OUR RECOLLECTION OF THE PROBLEM WAS THAT THE YARD WAS UNABLE TO HIRE ADDITIONAL MANPOWER FOR A SHORT TERM JOB SUCH AS THE BATON ROUGE. ALTHOUGH WE AGREE THAT NMIW APPEARED TO REACH THE LIMITS OF ITS STEEL

REPAIR CAPABILITY WITH AVAILABLE MANPOWER, WE FEEL THAT A LARGE PART OF THE PROBLEM MAY HAVE BEEN THE ONGOING WORK ON THE S.S. ASPEN WITH MAJOR STEEL WORK TO ACCOMPLISH IN DRYDOCK FROM 6/20-25. IT APPEARED THAT STEEL MANPOWER WAS VERY SCARCE DURING THAT TIME FRAME AND THE ONLY JOBS REALLY WORKED WITH ANY EFFORT WERE THE BOW DAMAGE (103) AND THE LONGITUDINAL BULKHEAD REPAIRS IN 3C-3P. WE ALSO WOULD LIKE TO POINT OUT THAT NMIW TOOK ON AN EMERGENCY STEEL REPAIR OF ANOTHER VESSEL ACROSS THE RIVER DURING THE BATON ROUGE JOB. THIS WAS CERTAINLY UNUSUAL IF THEY WERE REALLY SHORT ON MANPOWER. IN CONCLUSION, EXXON FEELS THAT NORTHWEST MARINE, ESPECIALLY THE STEEL FOREMEN WHO WORKED THE JOB, RON HUDSON AND LES PAYNE DID AN OUTSTANDING JOB COVERING THE WORK IDENTIFIED. THEY WORKED VERY CLOSELY WITH OUR STEEL MAN, BEN SHEAFFER, TO MINIMIZE UNNECESSARY MOVING OF MEN AND EQUIPMENT AND OVERALL, OUR FEELING WAS THAT THE STEEL PART OF THE JOB WENT VERY SMOOTHLY. WHEN WE NEGOTIATED THE FINAL INVOICE WITH NMIW, WE AGREED TO PRICES FOR ALL OF THE CHANGE ORDER WORK. IT WAS OUR FEELING AT THE END OF OUR NEGOTIATIONS THAT ALTHOUGH WE HAD BEEN VERY GENEROUS WITH OUR PRICING OF THE CHANGE ORDERS, WE HAD DONE SO TO COMPENSATE NORTHWEST MARINE FOR THE IMPACT ON THE ORIGINAL WORK. AT OUR LAST NEGOTIATING SESSION, NMIW CLAIMED THAT THEY REQUIRED AN ADDITIONAL \$27,400 TO ADEQUATELY COMPENSATE THEM FOR THE STEEL ITEMS. NOW THEY ARE ASKING FOR \$98,070 IN ADDITIONAL COMPENSATION. THIS GROWTH IN THE CLAIM CONCERNS US. AS WE STATED, EXXON FEELS THAT WE COMPENSATED NORTHWEST MARINE FOR IMPACT ON THE ORIGINAL STEEL ITEM IN PRICING THE CHANGE ORDER WORK. WE DO NOT FEEL THAT THERE IS MUCH VALIDITY TO THEIR CLAIMS OF MOVING "MEN AND EQUIPMENT", GROWTH IN "OWNER REQUESTED DRYDOCK WORK" OR LOSSES OF EFFICIENCY DUE TO LESS SKILLED MANPOWER. WE ARE WILLING TO DISCUSS THIS ITEM FURTHER WITH THEM, HOWEVER NORTHWEST MARINE SHOULD BE PREPARED TO SHOW EXXON IN MUCH GREATER DETAIL EXACTLY HOW OUR ACTIONS OR INACTION IN RUNNING THIS JOB CAUSED YOU TO EXCEED YOUR ORIGINAL BUDGET BY 44 PERCENT.

102 - MISCELLANEOUS HULL DAMAGE

THIS ITEM WAS COMPLETED AS WRITTEN IN THE ORIGINAL BID SPECIFICATION WITH ONE CHANGE TO ENLARGE THE SIZE OF ONE INSERT FROM 24" X 48" TO 36" X 48". SINCE EXXON FEELS THAT THERE WAS NO OVERALL WORK GROWTH AS STATED IN OUR GENERAL COMMENTS AND THERE WAS ALSO NO OVERALL STEEL GROWTH IN DOLLARS SPENT COMPARED TO THE ORIGINAL PART I AND II, WE DO NOT CONSIDER THE CLAIM FOR IMPACT COSTS AGAINST THIS ITEM TO BE VALID.

103 - HULL DAMAGE PORT BOW

EXXON DISAGREES WITH NMIW'S CLAIM THAT GROWTH AND THE ASSOCIATED MANPOWER SHORTAGE CAUSED YOU TO EXCEED YOUR BUDGET ON THIS ITEM. OUR REASONS ARE THE SAME AS STATED ABOVE FOR ITEM 102. ONCE AGAIN, THE WORK WAS ACCOMPLISHED PRETTY MUCH AS WRITTEN IN THE ORIGINAL SPECIFICATION, AND THIS WORK AREA WAS OUTSIDE OF THE DECK BLASTING AND COATING AREA.

WE FEEL THAT NMIW SHOULD LOOK AT THE DECISION MADE WITHIN THEIR STEEL DEPARTMENT TO REMOVE, STRAIGHTEN AND RE-USE ALL OF THE BULB PLATE TRANSVERSE SHELL FRAMES AND THE LARGE BULB PLATE ON THE TOP OF THE BULWARK. THE BOILERMAKERS DID AN EXCELLENT JOB IN ACCOMPLISHING THIS WORK, HOWEVER IT WAS MUCH MORE TIME CONSUMING AND THEREFORE MORE EXPENSIVE TO COMPLETE THE REPAIRS IN THAT MANNER. WE ALSO BELIEVE, AS STATED EARLIER THAT THE ONGOING WORK ABOARD THE ASPEN PROBABLY CAUSED THE YARD TO EXPEND MORE OVERTIME THAN NORMALLY REQUIRED.

EXXON DOES NOT FEEL THAT THE IMPACT CLAIM FOR THIS ITEM WARRANTS ADDITIONAL PAYMENT.

113 - CARGO PIPING ON DECK

THE DECK PIPING HYDROSTATIC TEST WAS COMPLETED ON 6/21, MOST OF THE HYDRO TEST PROBLEMS WERE WITH THE PIPING IN THE TANKS. EXXON DOES NOT FEEL THAT THE PIPE HYDRO HAD ANY AFFECT ON THE DECK CARGO PIPING WORK.

WE DISAGREE WITH NMIW'S CLAIM THAT WE DELAYED IN PUTTING WORK IN HAND WHICH WAS KNOWN. AS NMIW KNOWS, WE DID A MAJOR REWORK OF THE DECK CARGO PIPING, REPLACING 14 OF 19 DRESSER COUPLINGS ON DECK AND IN THE PROCESS WE DISCOVERED MANY WASHED OUT PIPE ENDS WHICH REQUIRED REPLACEMENT AND CLAD WELDING. THE REPAIR CHANGE ORDERS WERE ISSUED AS THE DEFECTS WERE DISCOVERED SO THAT NMIW COULD FIT THE WORK INTO THE SCHEDULE AS SOON AS POSSIBLE. WE FEEL THAT THE AMOUNT AND TYPE OF CHANGE ORDER WORK SHOULD HAVE BEEN EXPECTED. THAT IS WHY WE HAD PART II MONEY IN OUR BUDGET. WE ESTIMATE THE OVERALL GROWTH IN DECK CARGO PIPING TO BE 33 PERCENT.

WE FEEL THAT THE YARD MAY HAVE UNDERESTIMATED THE LABOR REQUIRED TO REPLACE THE 14 DRESSER COUPLINGS. MANY OF THE RENEWALS REQUIRED BREAKING MULTIPLE FLANGES, REMOVING INTERFERENCES AND CRANE SERVICE TO MOVE MORE THAN ONE SECTION OF PIPE.

IN THE PIPING EXTRAS AS WITH THE STEEL EXTRAS, WE USED AN O.T. MAN HOUR RATE WHERE REQUIRED TO PRICE THE CHANGE ORDER WORK SINCE OUR UNDERSTANDING WAS THAT WE WERE PAYING THAT RATE TO COMPENSATE NORTHWEST MARINE FOR THE FACT THAT THE CHANGE ORDER WORK REQUIRED THEM TO WORK OVERTIME. FOR THE REASONS STATED ABOVE, WE FEEL THAT NO ADDITIONAL COMPENSATION FOR THIS ITEM IS REQUIRED.

125 - WT DOORS AND HATCHES

EXXON'S POSITION ON THIS ITEM IS AS STATED PREVIOUSLY; THE OVERALL GROWTH ON THIS JOB WAS NOT EXCESSIVE, IN FACT NORTHWEST MARINE SHOULD HAVE BEEN PREPARED TO ACCOMPLISH THE VOLUME OF WORK CONTAINED IN PARTS I,II AND III IN THE ORIGINAL 21 DAY BID TIME.

ONCE AGAIN, WE PAID A PREMIUM FOR CHANGE ORDER WORK ON THIS ITEM WITH THE UNDERSTANDING THAT OVERTIME HAD TO BE EXPENDED ON THE CHANGE ORDER WORK SO THAT THE ORIGINAL ITEM COULD BE ACCOMPLISHED ON STRAIGHT TIME.

WE DO NOT FEEL THAT THE IMPACT ON THIS ITEM WAS SIGNIFICANT AND THE GROWTH OF 12 PERCENT IS NOT EXCESSIVE.

EXXON DOES NOT AGREE WITH NMIW'S POSITION REGARDING IMPACT COSTS FOR THIS ITEM.

131 - DECK STEAM PIPE SUPPORTS

135 - PIPE SUPPORTS ON DECK

ITEM 131: THIS WAS A FAIRLY SMALL ITEM IN THE OVERALL SCOPE OF WORK ON DECK AND SHOULD HAVE EASILY BEEN WORKED INTO THE SCHEDULE TO AVOID CONFLICT WITH THE DECK BLASTING AND COATING. MOST OF THE WORK ON THIS ITEM WAS DONE IN THE SHOP, FABRICATING AND GALVANIZING THE SADDLES UNDER PART II OF THE ITEM.

WE FEEL THAT THEIR PART II ESTIMATE TO FABRICATE AND INSTALL 10 SADDLES WAS LOW AND IS PROBABLY THE SOURCE OF THE BUDGET PROBLEM ON THIS ITEM.

WE DO NOT AGREE WITH NMIW'S CLAIM FOR ADDITIONAL PAYMENT FOR IMPACT COSTS.

ITEM 135: THIS WAS ALSO A FAIRLY SMALL ITEM WHICH THE PIPE PERSONNEL TENDED TO PUT ON THE BACK BURNER UNTIL LATE IN THE JOB. THAT APPROACH LEFT FEW OPTIONS IN DEALING WITH THE INTERFERENCE WITH DECK BLASTING AND COATING AND PROBABLY RESULTED IN EXCESSIVE OVERTIME CHARGES.

WE BELIEVE THAT THIS ITEM IS TIED INTO THE OVERALL SCOPE OF PIPING WORK ACCOMPLISHED DURING THE REPAIR. AS WITH THE OTHER ITEMS WE PAID PREMIUM PRICES FOR THE CHANGE ORDER WORK WHICH WAS TO COMPENSATE NMIW FOR IMPACT ON THE ORIGINAL WORK.

ONCE AGAIN, WE CANNOT SEE THAT AN ADDITIONAL PAYMENT FOR IMPACT IS WARRANTED.

145 - UPPER DECK COATING

IT IS UNFORTUNATE THAT NMIW HAD TO RESCHEDULE THE DECK COATING SO MANY TIMES. HOWEVER, THINGS PROBABLY WOULD HAVE GONE SMOOTHER IF THEY HAD SHARED THEIR SCHEDULING IDEAS WITH EXXON. AS I SAID PREVIOUSLY, CHANGES IN SCHEDULES SEEMED TO HAVE BEEN MADE IN A VACUUM.

NMIW IS INCORRECT IN THEIR STATEMENTS REGARDING THE FRESH WATER WASHING OF THE DECK. THE ORIGINAL SPECIFICATION CALLED FOR A FRESH WATER WASH (THIS MEANS A FIRE HOSE OR GARDEN HOSE) OF 100% OF THE DECK AREA TO REMOVE SALTS, DIRT, OIL AND GREASE. THAT WORK WAS ACCOMPLISHED AND NMIW WAS PAID AS PART OF THE AGREED PRICE FOR THE ORIGINAL ITEM. EXXON SPECIFIED A HIGH PRESSURE WATER WASH OF 25,000 SQUARE FEET OF THE MAIN DECK PRIOR TO COATING. THIS MEANS A RENTAL MACHINE CAPABLE OF 3000 PSI PRESSURE WASHING. WE WERE ADVISED BY NMIW'S PAINT AND SANDBLAST FOREMEN THAT IT WAS BETTER TO SWEEP EVERYTHING AND ELIMINATE THE H.P. WATER WASHING. IT WAS ALSO OBVIOUS DURING THE FIRST DAY OF THE CONTRACT THAT THE MEN OPERATING THE H.P. WASHING MACHINE WERE NOT HOLDING THE NOZZLE CLOSE ENOUGH TO THE DECK TO ADEQUATELY CLEAN AND DEGREASE THE SURFACE. IN OUR AGREED PRICE FOR FIELD ORDER 241 (145-C) WE PAID NMIW FOR: (1) THE COST OF RENTING THE H.P. WATER WASH MACHINE, (2) THE COST OF THE LABOR EXPENDED ON THE FIRST DAY OF THE CONTRACT ATTEMPTING TO H.P. WASH THE DECK, (3) THE DIFFERENTIAL FOR SANDSWEEPING THE DECK INSTEAD OF HIGH PRESSURE WATER WASHING. ALL OF THESE FIGURES WERE DISCUSSED WITH THE YARD AND AGREED AS BEING A FAIR PRICE FOR THE WORK ACTUALLY ACCOMPLISHED BY NORTHWEST MARINE. I HOPE AT THIS POINT IN THE SETTLEMENT OF THE CONTRACT THEY DO NOT WISH TO OPEN UP ALL ITEMS FOR RENEGOTIATION.

REGARDING THE VERIFICATION OF THE SQUARE FOOTAGE IN EACH ZONE PRIOR TO BLASTING, I REFER YOU TO SECTION II. PARA. C OF THE SPECIFICATION WHICH REQUIRES THIS AGREEMENT. IF NORTHWEST MARINE FELT THAT THIS PART OF THE PAINTING EVOLUTION WOULD CAUSE LOSS OF EFFICIENCY AND DOWN TIME THEN THEY SHOULD HAVE ATTACHED A PRICE TO THAT PARAGRAPH IN THE SPECIFICATION. WE DISCUSSED THE SURVEY PROCESS WITH THE SANDBLAST FOREMAN AND DECIDED THAT IT WOULD BE FAIRER TO THE YARD TO WALK EACH ZONE PRIOR TO BLASTING SO THAT NEWLY DAMAGED AREAS COULD BE INCLUDED IN THE TOTALS.

EXXON BELIEVES THAT THEIR IMPACT COMMENTS REGARDING ADDITIONAL SET UP AND TEAR DOWN, ADDITIONAL PIECEMEAL CLEANING AND DELAYS CAUSED BY RUNNING OUT OF THE

DECK RED PAINT WERE DISCUSSED AND WORKED INTO OUR AGREED PRICE FOR FIELD ORDER 281 (ITEM 145-D). DURING THE NEGOTIATION OF THAT ITEM, WE RE-WORKED THE GROWTH, DELAY AND DISRUPTION MANY DIFFERENT WAYS BEFORE EXXON AGREED TO THE PRICE OFFERED BY NORTHWEST MARINE OF \$49,324.

EXXON WAS AWARE, AT THE CONCLUSION OF OUR NEGOTIATIONS IN AUGUST, THAT NORTHWEST MARINE STILL FELT THAT SOME COMPENSATION WAS DESERVED FOR THE RE-BLASTING OF ZONE 3 AFTER RAIN ON 7/16 AND THAT THEY WERE LOOKING FOR AN ADDITIONAL \$52K FOR THE DECK COATING FOR DELAY AND DISRUPTION DUE TO THE GROWTH IN WORK SCOPE. HOWEVER, THAT \$52K HAS NOW GROWN TO \$74K AND OUR VERBAL REQUEST FOR A BREAKDOWN OF THE COSTS TO REBLAST ZONE 3 WAS DEFERRED PENDING MR. ZAVIN'S VISIT TO HOUSTON LATE IN NOVEMBER.

WE WOULD ALSO LIKE TO POINT OUT THE FOLLOWING CONCESSIONS MADE BY THE OWNER TO ASSIST IN THE TIMELY COMPLETION OF THE DECK COATINGS: (1) WE EXCLUDED THE AREA BENEATH THE MAIN DECK WIREWAY FROM THE BLASTING DUE TO FEARS OF CABLE DAMAGE, (2) WE REDUCED THE SCOPE OF ELECTRICAL WIRE RENEWALS, ITEM 99, BY 50 PERCENT, (3) WE ATTEMPTED TO REDUCE THE SCOPE OF HYDRAULIC PIPING RENEWALS, ITEM 172, HOWEVER THAT IS STILL UNDER DISCUSSION, (4) WE REDUCED THE SQUARE FOOTAGE OF THE CARGO TANK COATING AND WENT TO A SINGLE COAT APPLICATION, AND (5) WE PAID THE PREMIUM PAY TO BLAST ZONE 5 ON THE 4TH OF JULY. WE ALSO PAID A HANDSOME PREMIUM ABOVE THE BID SPECIFICATION UNIT RATES FOR SPOT BLASTING AND SWEEPING IN CALCULATING THE PRICE FOR THE GROWTH UNDER FIELD ORDER 281 (145-D). THIS PREMIUM RATE WAS PAID TO COMPENSATE NORTHWEST MARINE FOR THE IMPACT OF THE GROWTH.

WE AGREE THAT WE WERE NOTIFIED EARLY IN THE CONTRACT REGARDING THE REQUIREMENT FOR EXTRA TIME FOR GROWTH IN DECK BLASTING AND FEEL THAT THERE MAY BE SOME VALIDITY TO THE SHIPYARD'S POSITION REGARDING THE RE-BLAST OF ZONE 3. HOWEVER, NMIW SHOULD BE PREPARED TO PRESENT DETAILS AND ESTIMATES TO SUBSTANTIATE THEIR POSITION IN THIS AREA.

172 - HYDRAULIC PIPING

WE HAVE DISCUSSED MANY TIMES EXXON'S DECISION TO SLEEVE 11 SECTIONS OF PIPE INSTEAD OF RENEWING THEM. OUR POSITIONS HAVE NOT CHANGED. HOWEVER, IF SLEEVING IS TRULY MORE EXPENSIVE THAN RENEWAL, WHY WERE WE CHARGED \$3912 FOR THE RENEWAL OF ONE SECTION OF PIPE INSTEAD OF SLEEVING IT? (SEE FIELD ORDER 320, ITEM 172-E.) IF NMIW'S POSITION IS CORRECT, WE SHOULD HAVE RECEIVED A CREDIT FOR THAT CHANGE.

WE DO NOT RECALL BEING TOLD EARLY ON BY NMIW THAT THE SLEEVING APPROACH WOULD BE MORE EXPENSIVE. WE SUBMITTED THE CHANGE ORDER ON 6/23 AND RECEIVED THE YARD'S ESTIMATE ON 7/10. MOST OF THE WORK HAD ALREADY BEEN COMPLETED BY THAT TIME. WE THOUGHT THAT IT WAS AN ERROR AND POSSIBLY THE PARENTHESES WHICH INDICATE A CREDIT WERE OMITTED.

VIRTUALLY ALL OF THE ACTUAL SLEEVING WORK WAS DONE ON JULY 4TH WITH EXXON PAYING THE OVERTIME PREMIUM. THERE WAS SUCH A VOLUME OF PIPING WORK ON THIS JOB THAT THE PIPE SHOP WAS COMPLETELY FULL AND PIPE WAS BEING SPOOLED IN THE BOILERMAKERS SHOP. THE X-RAYS OF WELDS TOOK EXTRA TIME AND THE PICKLING TURNAROUND WITH A SUBCONTRACTOR TOOK 3 DAYS. AS A CONCESSION, WE ALLOWED THE HYDROSTATIC TEST, AND BLASTING/COATING OF THE PIPING ON BOARD.

02/06/1990 14:24 FROM EXXON SHIPPING CO HOUSTON TO NMI

P.10

WE FEEL THAT NMIW SHOULD LOOK AT THE FOLLOWING PROBLEMS IN EVALUATING THE REASONS FOR YOUR BUDGET OVERRUN ON THIS ITEM: (1) ELECTRICAL PROBLEMS WITH THE FLUSHING RIG DELAYED THE HYDRO AND FLUSH ONE FULL DAY, (2) ACCIDENTAL WATER CONTAMINATION OF THE HYDRAULIC OIL COST NMIW A GREAT DEAL OF LABOR, FILTER UNIT RENTAL AND LUBE OIL REPLACEMENT, (3) THE FLUSHING TIME REQUIRED TO GET ACCEPTABLE CLEANLINESS WAS PROBABLY TWICE WHAT IT COULD HAVE BEEN DUE TO SLOPPY MASKING AND PROTECTION OF OPEN LINES WHILE SANDBLASTING, (4) THE MACHINE SHOP REMOVED LABELS FROM THE ON-DECK FILTER UNITS OVERHAULED UNDER ITEM 169, THIS CAUSED A TREMENDOUS LOSS OF EFFICIENCY AND REWORK IN REINSTALLING THE 2 INCH SUPPLY AND RETURN LINES TO EACH WINCH, (5) THERE WERE ALSO A NUMBER OF MINOR AND MAJOR HYDRAULIC OIL LEAKS WHICH REQUIRED LABORERS TO CLEAN UP ON DECK DUE TO IMPROPER GASKETS, LOOSE BOLTS AND POOR COMMUNICATION.

EXXON AGREES THAT WE STILL HAVE THE OUTSTANDING FIELD ORDER TO RESOLVE REGARDING THE SLEEVING OF THE PIPE HOWEVER WE DO NOT FEEL THAT NMIW IS DUE ANY IMPACT COMPENSATION UNDER THE ORIGINAL ITEM.

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NWMAR130839

REVIEW SUMMARY:

WE IMMEDIATELY TAKE ISSUE WITH NORTHWEST MARINE'S ORIGINAL PRODUCTION SCHEDULE. WE SAW THE SCHEDULE IN AN UNFINISHED CONDITION DURING THE FIRST FEW DAYS OF THE CONTRACT. IT WAS NOT COMPLETED UNTIL 6/28/89, SEVEN DAYS AFTER THE START OF WORK. THE SCHEDULE IS SO VAGUE REGARDING SEQUENCING OF THE TANK AND VOID RELATED WORK, STEEL, PIPING AND COATING THAT IT IS USELESS. IT ALSO SHOWS BLASTING TOPSIDE WHILE IN THE DRYDOCK WHICH USUALLY IS IMPRACTICAL DUE TO GRIT CONTAMINATION OF THE HULL COATING WORK AND VICE VERSA.

ONE OF THE BIGGEST PROBLEMS WE FACED IN THE EARLY PART OF THE CONTRACT WAS WHAT APPEARED TO BE A LACK OF PLANNING AND SCHEDULING PRIOR TO THE SHIP'S ARRIVAL.

WE FEEL THAT THROUGHOUT THIS DOCUMENT NORTHWEST MARINE HAS OVER STRESSED THE LATENESS OF SOME CHANGE ORDER WORK. MOST OF THE ITEMS ISSUED AFTER 7/12 WERE TO DOCUMENT WORK ALREADY COMPLETED OR TO ACCOMPLISH SMALL, LAST MINUTE EMERGENCY REPAIRS.

TANK/VOID RELATED WORK PACKAGE:

OUR COMMENTS REGARDING STEEL HAVE BEEN PREVIOUSLY STATED. THERE IS NOTHING TO ADD WHICH IS RELATED TO THE IMPACT ANALYSIS CHART.

THE CARGO PUMP REPAIRS BECAME A CRITICAL ITEM BECAUSE THE DISASSEMBLY WAS DEFERRED APPROXIMATELY 1 WEEK WHILE THE MACHINISTS WERE WORKING THE S.S. ASPEN.

WE ARE SURPRISED TO SEE THAT THE REMOVAL OF THE SHIP'S BUNKERS AND GAS FREEING OF THE PORT BUNKER TANK ARE NOT SHOWN AS A CRITICAL ITEM. PROCRASTINATION IN FINDING A BARGE AND MISINFORMATION REGARDING THE ACCEPTABILITY OF THE SULFUR CONTENT OF THE FUEL CAUSED A COMPLETE BREAKDOWN IN THE FLOW OF WORK THAT DEPENDED ON THE BUNKER TANK BEING GAS FREE. NORTHWEST MARINE WAS VERY FORTUNATE THAT EXXON'S LOCAL AGENT FOUND A BARGE COMPANY WILLING TO STORE THE OIL WHILE REPAIRS WERE ACCOMPLISHED. NMIW ALSO LOST VERY LITTLE PRODUCTION TIME BECAUSE OF EXXON'S INSISTENCE THAT NMIW GET THE SHIP OFF THE DRYDOCK ON TIME, 6/26, TRANSFER THE BUNKERS THAT DAY (A SUNDAY) AND GAS FREE THE TANK OVER THE 4TH OF JULY HOLIDAY. HAD WE AGREED TO STAY ON THE DOCK AN ADDITIONAL THREE DAYS AS REQUESTED BY NMIW, WE WOULD HAVE LOST TWO OR THREE DAYS OF HOT WORK.

DRYDOCK RELATED WORK PACKAGE:

WE HAVE NOTHING TO ADD TO OUR PREVIOUSLY STATED COMMENTS REGARDING THE DRYDOCK WORK. WE WOULD LIKE TO STRESS THAT MOST OF THE "DRYDOCK CRITICAL" STEEL WORK WAS IN THE ORIGINAL SPECIFICATION AND NMIW'S WORK ON THE S.S. ASPEN PROBABLY CREATED MORE OF A DISRUPTION THAN OUR CHANGE ORDERS. ALSO, THE NEED TO GET THE SHIP OFF THE DRYDOCK TO TRANSFER THE BUNKERS, COMPLETE THE STEEL REPAIRS IN #5 CENTER, AND RE-LOAD THE BUNKERS TO SUPPORT LITE OFF OF THE MACHINERY FAR OUTWEIGHED THE STEEL SUPERINTENDENT'S IDEAS REGARDING WHICH STEEL WORK SHOULD BE DONE PRIOR TO RE-FLOATING.

DECK AND HOUSE RELATED WORK PACKAGE:

AS STATED PREVIOUSLY, THE ORIGINAL SCHEDULE FOR THE TOPSIDE WORK APPEARS UNREALISTIC DUE TO BLASTING AND COATING CONFLICTS WITH DRYDOCK WORK. IN FACT,

NO TOPSIDE OR TANK BLASTING WAS CONDUCTED WHILE THE VESSEL WAS IN DRYDOCK. THE SCHEDULE FOR THE COMPLETION OF THE REPAIRS WAS PUT TOGETHER BY THE SHIP'S SUPERINTENDENT, AND OUR REPAIR STAFF ON 7/2 WHILE WAITING FOR THE VESSEL TO SHIFT TO THE WET BERTH AFTER COMING OUT OF DRYDOCK.

THE FINAL ITEMS TO COMPLETE ON DECK WERE THE PAINT, THE CARGO AND BALLAST PUMPS, AND THE STEAM PIPE LAGGING. THE LAGGING WAS AN OPTIONAL ITEM WHICH WE WERE WORKING ON TIME AND MATERIAL TO GET AS MUCH AS POSSIBLE ACCOMPLISHED. THE PUMPS WERE ORIGINAL BID SPECIFICATION ITEMS WHICH GOT PUSHED BACK BY WORK ON THE CANS AND THE HIGH WORKLOAD ON THE MACHINISTS DURING THE FIRST WEEK OF THE CONTRACT. THE PAINT HAS PREVIOUSLY BEEN DISCUSSED.

THE DECK WORK PACKAGE WAS DEFINITELY THE CRITICAL PATH. WE TRIED, AS STATED EARLIER, TO EASE THE IMPACT OF THE MANY CHANGES BY REDUCING THE WORK SCOPE OF A NUMBER OF ITEMS. IN HINDSIGHT, THE ZONE CONCEPT WAS GOOD, AND THE PREVAILING WINDS REALLY KEPT THE DECK BLASTING INTERFERENCE DOWN TO A MINIMUM, BUT THE OTHER DECK AND TANK WORK PROBABLY COULD HAVE BEEN ACCOMPLISHED MORE EFFICIENTLY IF IT HAD ALSO BEEN PACKAGED IN ZONES.

MOST OF THE OTHER ITEMS NMIW CLAIMS AS IMPACTING THE WORK IN THIS PACKAGE HAVE BEEN PREVIOUSLY DISCUSSED EXCEPT WE WOULD LIKE TO POINT OUT AGAIN THAT THEY ARE OVER STRESSING THE LATE CHANGES (7/15 AND 7/16). THE DECK HYDRAULIC PIPING ITEM WAS AN EMERGENCY BLOWOUT WHICH OCCURRED ON STARTUP AND THE UPPER DECK AND HOUSE COATING CHANGES WERE TO DOCUMENT WORK PREVIOUSLY AUTHORIZED.

LIGHT OFF RELATED WORK PACKAGE:

EXXON FELT THAT NORTHWEST MARINE MADE AN EXCELLENT EFFORT TO COMPLETE THE MACHINERY WORK PRIOR TO LIGHT OFF. IN FACT, LIGHT OFF WAS ACHIEVED ON JULY 9TH.

WE HAVE NOTED THAT ASBESTOS REMOVAL IS NOT INCLUDED HERE. A GREAT DEAL OF TIME WAS LOST EARLY IN THE CONTRACT DUE TO ASBESTOS SHUTDOWNS OF THE MACHINERY SPACE WORK. EVEN THOUGH SAMPLES OF THE INSULATION WERE TAKEN DURING THE PRE-SHIPYARD SURVEY, ADEQUATE PRECAUTIONS WERE NOT TAKEN TO PREVENT DAMAGE TO THE TURBINE INSULATION. ASBESTOS WAS MUCH MORE OF A FACTOR THAN ANY ACTION OR INACTION BY EXXON.

ANOTHER MAJOR PROBLEM WAS THE HIGH WORKLOAD ON THE MACHINISTS DUE TO WORK ON THE ASPEN DURING THE FIRST WEEK OF THE JOB. ALL ENGINEER ROOM PUMP WORK WAS DEFERRED UNTIL THE DRYDOCKING. THIS PROBABLY CAUSED INEFFICIENCY AND EXCESSIVE OVERTIME.

THE VALVE SHOP BECAME OVERLOADED DURING THE DRYDOCKING PHASE OF THE JOB ALSO. WE AGREE THAT THERE WERE SOME ADDITIONAL VALVES TO BE OVERHAULED, BUT WE PAID PREMIUM PRICES FOR THAT WORK BECAUSE OF THE IMPACT.

EXXON MADE EVERY EFFORT TO AUTHORIZE WORK AS SOON AS IT WAS IDENTIFIED. MANY OF THESE MACHINERY ITEMS COULD NOT BE WRITTEN UNTIL THE PUMP OR VALVE WAS OPENED FOR INSPECTION.

HABITABILITY RELATED WORK PACKAGE:

WE HAVE NOTHING TO ADD REGARDING THIS PART OF THE JOB.



NORTHWEST MARINE IRON WORKS

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December 11, 1989

(EXXON) Shipping Company
800 Bell Street, Room 3409
Houston, Texas 77002

Attention: Mr. Herb Leyendecker

Subject: "EXXON BATON ROUGE" Impact Documentation

Gentlemen:

The below listed enclosures are herein provided to EXXON as requested in the November meeting held in your office with Bill Zavin of Northwest Marine, Inc.

This information clearly outlines the growth in the "EXXON BATON ROUGE" project and its impact on the original work package causing substantial cost overruns.

Northwest Marine, Inc. looks forward to mutually resolving this issue as soon as possible.

Sincerely,

Ivan G. Chandler
Commercial Accounts Manager

Enclosures: 1. Production Schedule Impact Analysis (2 copies)
2. Impact Analysis Review Summary
3. Comments Pertaining to Impacted Original Work Items

cc: William M. Johnston
William Zavin

NWMAR130842

EXXON BATON ROUGE

IMPACT ANALYSIS

REVIEW SUMMARY:

Starting at the bottom of the chart is the original production network provided to Exxon. This schedule clearly defines Northwest Marine's scheduled production sequences such as blasting, priming, painting, production work in tanks and other designated work areas (zones), it also specifically identifies the scheduled drydock period. Furthermore boiler, light-off, hydraulic system and habitability released work packages are also clearly shown.

The baseline production schedule becomes the basis for demonstrating the impact caused by Exxon to Northwest Marine's work sequences and schedules which ultimately caused the EXXON BATON ROUGE to be delivered 8 days beyond the originally scheduled delivery date of July 12, 1989.

Moving up the chart from bottom to top and keeping with the baseline production schedule which can be summarized into the following work packages.

1. Tank/Void Related Work
2. Drydock Related Work
3. Deck and House Related Work
4. Light-Off Related Work
5. Habitability Related Work

These work packages show the original schedule for contract work (within a reasonable time) for work by Northwest Marine, Inc. They also show all additional (new) work items (over and above the original work package) including those that had a significant impact on Northwest Marine's production schedule.

TANK VOID RELATED WORK PACKAGE

All tank and void related work was originally scheduled for completion by July 10, 1989. Due to the tremendous amount of additional work identified by Exxon tank and void related work was not completed until July 15, 1989.

59 Field/Change Orders were issued involving tank/void related work of which 31 had a significant impact on Northwest Marine's original work/delivery schedule. The major schedule impact to this work package was the enormous amount of additional steel work (Item 101) identified by Exxon late in the performance period.

Also of consequence were large amounts of repairs to cargo pumps/piping and valves.

The majority of the impact items were issued between June 26, 1989 and July 8, 1989 and as late as July 14, 1989 which certainly did not provide Northwest Marine, Inc with an opportunity to complete the added work within the original contract schedule.

DRYDOCK RELATED WORK PACKAGE

Steel repairs identified by Exxon for accomplishment during the scheduled drydock period (June 26, 1989 to July 1, 1989) had a tremendous affect on previously scheduled work. Highly skilled workers required to make repairs to the newly identified steel work were moved from other critical work areas to support the drydock work requested to be accomplished by Exxon.

Northwest Marine, Inc provided Exxon with other conditions found during the drydock inspection/survey which under normal marine practices would have been required to be repaired prior to undocking. The work was of such a magnitude that additional days on drydock would have been required. The work was ultimately deferred by Exxon to a period outside the drydock envelope.

DECK AND HOUSE RELATED REPAIRS

All deck and house related work was originally scheduled for completion by July 8, 1989, therefore allowing four (4) days for deck coating applications. All house work was scheduled for completion by July 8, 1989 with blasting/painting completions during the interim period June 26, 1989 through July 4, 1989.

A total of approximately 66 field/change orders were issued to this work package of which 19 had a decisive impact on the scheduled delivery of the EXXON BATON ROUGE.

The sheer amount and the late identification of growth work (new) to this work package prevented/impacted Northwest Marine, Inc from implementing the original highly efficiently sequenced production/repair schedule. Work around programs were devised in an attempt to maximize efficiency. Work sequences (non-efficient) were constantly changed to satisfy Exxon's request. Delays caused by owner furnished material not being available prevented Northwest Marine from efficiently completing critical tasks.

Numerous delays were caused by the lack of Owner Furnished paint required to paint the ships house.

The initial quantity of paint furnished to Northwest Marine, Inc was quickly depleted. Additional paint would not be available for 5 days. This required Northwest Marine's paint department to unrig and clean inplace paint equipment. After receiving the additional paint from Exxon, rerigging the paint equipment was required. Also, machinery, equipment, doors, etc. located in the affected

area had to be reprotected prior to painting as protection was removed to accomplish other identified work.

Additional impact was experienced in Zone 4, where painting of the deck had to be rescheduled until after the house was completely painted, otherwise overspray from the house would carry over to the newly painted deck.

Late identification of work to the on-deck cargo piping system required shifts in critical crafts from previously scheduled work/areas.

Also late identification of work to the deck hydraulic piping system prevented Northwest Marine from completing scheduled work. Field orders for additional work to the hydraulic piping system were issued as late as July 16, 1989 requiring four (4) days of work effort to complete.

Field orders to sandsweep the upper deck and additional house coatings were issued July 15, 1989 requiring approximately six (6) days to complete.

LIGHT-OFF RELATED WORK PACKAGE

All boiler/light-off related work was originally scheduled to be complete by July 7, 1989 with light-off of the ship's propulsion plant scheduled for July 8, 1989.

Work in the machinery spaces did not complete on schedule due to the extra ordinary amount of additional work items identified by Exxon. 92 field/change orders were issued by Exxon of which 18 alone had a significant impact on the work package completion schedule. The total number of field/change orders issued in the machinery spaces certainly had an effect on the overall production schedule as the work identified in the machinery spaces required that critical crafts be moved from originally scheduled work to squelch the requirements generated by Exxon in the machinery spaces.

Field/change orders were still issued as late as July 15, 1989 to July 17, 1989.

Late identification by Exxon to work to main propulsion machinery also had an effect on Northwest Marine's ability to adhere to the originally planned production schedule.

EXXON BATON ROUGE
Page Four (4)

HABITABILITY RELATED WORK PACKAGE

The Habitability Related Work Items (27) added to the original scope of work did not significantly impact the overall production schedule. However, field/change orders were issued as late as July 17, 1989.

S/S EXXON BATON ROUGE

Comments Pertaining to Impacted Original Work Items

001 SERVICES

The service item is budgeted based on known work scope. If the job growth is inordinate as it was on EXXON "BATON ROUGE", the service requirements become much greater. Additional service equipment such as welding machine leads, hoses, load centers, lights, air manifolds, fire protection equipment, ventilation, cranes and riggers and transportation requirements all increase and the service labor to set up and maintain this equipment grows in direct proportion with the work growth.

Northwest Marine's bid for the service item was based on the known work scope. Our price on "other unspecified services" was to cover these costs as known, not the 90 to 100% growth.

034 HOUSE COATING

The starting and stopping of this item caused loss of efficiency. The house was spotblasted and sandswept as required and the coat of primer applied. The shipyard ran out of owner furnished paint before the first coat of white paint was completed. This required the paint equipment to be unrigged and cleaned up unnecessarily.

The delay in receiving owner furnished paint (approximately 5 days) delayed the deck coating in Zone No. 4 because the over spray from painting the house would be on the new deck paint. Once the paint was received, the entire house was washed down and readied for finishing the first and applying the second color coat. The next day, the boilers were lit off and again, the house had to be washed down because of soot before painting could start, causing another day of delay.

The set up and tear down of equipment, having to go back and reprotect doors and equipment that got removed because of other work, the moving of manpower around to compensate for not having material to do the job properly and efficiently, all contribute to the manpower overruns on the original work package.

036 CARGO TANK COATING

Northwest Marine developed a sequence plan and schedule based on our knowledge of the work scope. Upon arrival, the plan was put into effect.

The tank blasting was to start in 5C. The equipment was set up and we were ready to start blasting when the owner's representative informed us that our schedule was not satisfactory and that a new one should be developed

due to additional steel repairs that were to be put in hand in tank 5C and other tanks.

Although this additional work was known before arrival, it was not provided to the contractor for scheduling.

Interferences with other and new work items due to the change of sequence caused unavoidable start up and shutdowns.

The cargo tank blasting and coating had to be worked in conjunction with the steel repairs cargo piping (in tank) and others on deck repairs (due to ventilation requirements). The additional growth in these other work items adversely affected the cargo tank blasting and coating.

101 STEEL REPAIRS

The volume of growth in the steel in critical areas such as work to be accomplished on drydock (at the Owner's request) caused a dilution of the highly skilled workers on the original work item.

The moving of men and equipment from one area to another every time another critical job comes up causes a devastating effect on the original work item and the planned schedule. Not only does it cause additional man hours, it causes additional and unnecessary overtime to be expended in the original work in order to try and maintain a delivery schedule.

A ceiling exists on the total available manpower that can be used efficiently on the structural repairs. When the growth exceeds that ceiling, efficiency is lost causing more man hours to be expended by lesser skilled craftsmen. EXXON refused to recognize the request for additional time as being realistic, consequently the contractor continued to spend additional labor hours, both straight time and overtime, in order to accomplish the required work.

ORIGINAL STRUCTURAL REPAIRS

| | |
|-----------------|---------------------|
| Fractures | 201 various lengths |
| Pitts | 61 various sizes |
| Seams and butts | 360 inches |
| Clad welding | 72 sq. in. |
| Install steel | 31,492 lbs. |
| Staging Towers | 226 |
| Total height | 1,868 ft. |
| Total area | 3,738 sq. ft. |
| Catwalks | 335 ft. |

ITEM 101A-P ADDITIONAL STRUCTURAL REPAIRS% OF GROWTH

| | | |
|-----------------|---------------------|---------|
| Fractures | 437 various lengths | 217.0 % |
| Pitts | 127 various sizes | 208.0 % |
| Seams and butts | 497 inches | 138.0 % |
| Clad welding | 128 sq. in. | 178.0 % |
| Installed steel | 15,629 lbs. | 49.6 % |
| Staging towers | 106 | 46.9 % |
| Total height | 1,680 ft. | 89.9 % |
| Total area | 2,334 sq. ft. | 59.8 % |
| Catwalks | 70 ft. | 20.9 % |

102 MISC HULL DAMAGE

This item was adversely affected by the redistribution of resources due to the growth on Item 101 and the interference with additional work items such as deck blasting and coating sequences.

Additional manning requirements caused a loss in efficiency due to having to shift the higher qualified steelworker to critical change orders.

EXXON was informed in the beginning that there were only a certain number of skilled steelworkers and once those are used up, Northwest Marine has to use people that aren't as skilled.

103 HULL DAMAGE PORT BOW

Problems are the same as indicated in other steel items. Refer to Items 101 and 102.

113 CARGO PIPING ON DECK

Many problems occurred in trying to obtain a satisfactory hydrostatic test that subsequent change orders didn't adequately compensate for.

Repairs were issued on a piecemeal basis causing inefficiencies in scheduling with work on other deck items. There were known repairs based on the hydro tests and the vessel's recommendations that were not put in hand timely.

Again, the scheduling changes in all of the deck blasting, tank blasting and steel repairs adversely affected item along with all of the listed items.

125 WT DOORS AND HATCHES

Same problem existed here as in other items.

The redistribution of manpower resources due to critical growth items.

The rescheduling to accommodate EXXON additional work.

Interferences with additional work items on deck and house.

Loss of efficiency on original work item caused by all of the above.

131 DK STEAM PIPE SUPPORTS

135 PIPE SUPPORTS ON DECK

Same problem as in other deck items.

Interferences with other additional work items.

Loss of efficiency in trying to work around the growth in other items such as blasting and coating, hydraulic piping repairs, lagging and structural repairs.

145 UPPER DECK COATING

In the original schedule, all deck blasting and coating was going to be accomplished at the completion of other repairs. However, due to growth in both this item and other additional items, the schedule was modified and the deck blasting and coating was set up in zones. The sequence had to be changed a third time early on due to the rescheduling of the tank blasting and coating.

By original specification, the entire deck was to be high pressured washed. This was accomplished. However, the Owner Representative disagreed and the contractor was only partially compensated although the work was completed.

At the customer's request, each zone had to be walked off, individually marked up, and agreed upon footage before commencing. This caused loss of efficiency and down time.

Due to additional work growth in various zones, the sequencing had to be changed several times, causing additional set up and tear down time.

Additional labor was used to clean up spent sand grit because of the piecemeal approach.

Delay of Owner furnished paint to complete caused loss of efficiency and the use of additional labor hours.

The setting up and reblasting and cleaning of Zone 3 due to inclement weather required additional man hours and material to be used that EXXON refused to compensate for.

EXXON was informed by Mr. Greg Lind that additional deck blasting would affect other work items on June 23, 1989.

172 HYDRAULIC PIPING

Cancellation of renewing eleven sections of piping and sleeving them instead caused additional work and schedule interference.

EXXON was informed shortly after the vessel's arrival in the contractor's facility that piecemeal sleeving of the piping was not cost effective.

The field order issued was priced early on and yet we were directed to continue.

Working piping on deck (instead of in the shop) caused interferences with other deck items causing inefficiencies and additional labor costs.

EXXON has been given an estimate showing how additional costs were arrived at.

EXXON BATON ROUGE

Impact items due to additional work.

| | <u>Original</u> | <u>Actual</u> | <u></u> |
|--------------------------|-------------------|---------------|---------|
| 001 Services | 3,962 | 5,170 | (1,208) |
| 034 House Coating | 631 (B.E.) | 2,124 | (1,493) |
| 036 Cargo Tank Coating | 2,084 | 2,978 | (894) |
| 101 Steel Repairs | 6,320 | 9,122 | (2,802) |
| 102 Misc. Hull Damage | 638 | 1,111 | (473) |
| 103 Hull Damage Port Bow | 3,199 | 3,811 | (612) |
| 113 Cargo Ppg on Dk | 352 | 741 | (389) |
| 125 WT Doors and Hatches | 1,258 | 1,873 | (615) |
| 131 Dk Stm Pipe Supports | 127 | 243 | (116) |
| 135 Pipe Supports on Dk | 150 | 340 | (190) |
| 145 Upper Dk Coating | 3,224 (all items) | 5,344.5 | (2,121) |
| 172 Hyd. Ppg | 3,349 | 3,685 | (336) |

Total Hours Over Budget

(11,249) hours

11,249 hours @ 35 + 5.7 =

416,157.00



SHIP REPAIRERS
GENERAL MACHINE WORK
ENGINEERING

NORTHWEST MARINE IRON WORKS

INVOICE

MAIL PAYMENT TO:
P.O. BOX 4000-58
PORTLAND, OREGON 97208

EXXON Shiping
800 Bell Street
Houston, Texas 77002-7426

DATE October 6, 1989
OUR JOB NO. 4705
CUSTOMER'S ORDER NO.
CONTRACT NO.
INVOICE NO. 4705-8
TERMS Net

CUSTOMER CODE NUMBER:

Duns No. 00-902-8580

EXXON BATON ROUGE
RETAINAGE BILLING

Retainage on agreed work items for
the EXXON "BATON ROUGE" shipyard
overhaul. Please see attached page.

Total Amount Due This Invoice

\$759,204.00

PAST DUE PAYMENTS SHALL BEAR INTEREST AT THE HIGHEST LAWFUL RATE UNTIL REPAYED, NOT TO EXCEED 1½% PER MONTH.

CORRESPONDENCE ADDRESS P.O. BOX 3109 PORTLAND, OREGON 97208 PHONE (503) 285-7557

NWMAR130853

EXXON BATON ROUGE

| | |
|-------------------------------------|----------------------|
| TOTAL JOB PRICE: | \$4,280,348.00 |
| Less: Impact Costs* | (416,157.00) |
| Outstanding Issue Items ** | (63,021.00) |
| Progress Payments: | |
| No. 1 | (584,987.00) |
| No. 2 | (672,415.00) |
| No. 3 | (930,988.00) |
| No. 4 | (540,668.00) |
| No. 5 | <u>(312,908.00)</u> |
| RETAINAGE REMAINING ON AGREED WORK: | <u>\$ 759,204.00</u> |

* Cost overruns on major original items impacted due to inordinate job growth in critical work items and areas.

** Outstanding Issue Items:

| | | |
|-----------|-----------------------------|---------------------|
| Item 001 | F.O. #337 Extra Days | \$ 46,240.00 |
| Item 002 | F.O. #338 Additional Days | 5,730.00 |
| Item 101K | F.O. #189 Overtime | 1,288.00 |
| Item 172A | F.O. # 57 Extra Dk Hyd Pipe | <u>9,763.00</u> |
| | | <u>\$ 63,021.00</u> |



SHIP REPAIRERS
GENERAL MACHINE WORK
ENGINEERING

NORTHWEST MARINE IRON WORKS

INVOICE

MAIL PAYMENT TO:
P.O. BOX 4000-58
PORTLAND, OREGON 97208

EXXON Shiping
800 Bell Street
Houston, Texas 77002-7426

DATE October 6, 1989
OUR JOB NO. 4705
CUSTOMER'S ORDER NO.
CONTRACT NO.
INVOICE NO. 4705-8
TERMS Net

CUSTOMER CODE NUMBER:

Duns No. 00-902-8580

EXXON BATON ROUGE
RETAINAGE BILLING

Retainage on agreed work items for
the EXXON "BATON ROUGE" shipyard
overhaul. Please see attached page.

Total Amount Due This Invoice

\$759,204.00

PAST DUE PAYMENTS SHALL BEAR INTEREST AT THE HIGHEST LAWFUL RATE UNTIL REPAYED, NOT TO EXCEED 1½% PER MONTH.

CORRESPONDENCE ADDRESS P.O. BOX 3109 PORTLAND, OREGON 97208 PHONE (503) 285-7557

NWMAR130855

EXXON BATON ROUGE

| | |
|-------------------------------------|----------------------|
| TOTAL JOB PRICE: | \$4,280,348.00 |
| Less: Impact Costs* | (416,157.00) |
| Outstanding Issue Items ** | (63,021.00) |
| Progress Payments: | |
| No. 1 | (584,987.00) |
| No. 2 | (672,415.00) |
| No. 3 | (930,988.00) |
| No. 4 | (540,668.00) |
| No. 5 | <u>(312,908.00)</u> |
| RETAINAGE REMAINING ON AGREED WORK: | <u>\$ 759,204.00</u> |

* Cost overruns on major original items impacted due to inordinate job growth in critical work items and areas.

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| | | |
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| Item 101K | F.O. #189 Overtime | 1,288.00 |
| Item 172A | F.O. # 57 Extra Dk Hyd Pipe | <u>9,763.00</u> |
| | | <u>\$ 63,021.00</u> |



NORTHWEST MARINE IRON WORKS

MAILING ADDRESS: P.O. BOX 3109
PORTLAND, OR 97208
5555 N. CHANNEL AVE., BLDG. 2
PORTLAND, OREGON 97217
PHONE: (503) 285-7557
TWX: 910-464-6107 NORMARINE PTL

October 3, 1989

Exxon Shipping
800 Bell Street
Houston, Texas 77002-7426

Attention: Mr. H. Leyendecker

Subject: S/S "BATON ROUGE" Invoice - Retainage

Dear Herb:

Please find attached our invoice for retainage on agreed items. Included also is one set of priced items. The remaining copies, due to the size, will be shipped by UPS.

As you are aware, four (4) field order changes have not been agreed to at this time. They have been priced (see summary sheet) but are not included in the retainage amount.

In addition, you will note that Northwest Marine has added a separate line price for impact costs. This is an outstanding item that needs to be discussed and resolved as soon as possible.

Northwest Marine is available to sit down and discuss these items at Exxon's convenience.

Sincerely,

Ivan G. Chandler
Project Manager

NWMAR130857



NORTHWEST MARINE IRON WORKS

MAILING ADDRESS: P.O. BOX 3109
PORTLAND, OR 97208
5555 N. CHANNEL AVE., BLDG. 2
PORTLAND, OREGON 97217
PHONE: (503) 285-7557
TWX: 910-464-6107 NORMARINE PTL

September 28, 1989

EXXON Shipping Company
P.O. Box 85278
San Diego, CA 92138

Attention: Mr. Steve Day

Subject: S/S "EXXON BATON ROUGE" Outstanding Issues

Reference: EXXON Shipping Company Letter Dated August 11, 1989

Dear Mr. Day:

After reviewing your letter and considering EXXON's position in regards to the outstanding issues, Northwest Marine offers the following comments:

A. Item 101K Steel Repair Overtime

Northwest Marine agrees that according to the way that the Field Order 189 — was written, the \$840.00 is an acceptable price only for the men that worked the steel repair overtime on 6/30 swing shift and on 7/1 day shift.

This amount, however, does not begin to cover the costs of moving men and equipment from other steel work or the delay and disruption of our work schedules to accommodate EXXON's request to concentrate on the longitudinal bulkhead and other new repairs while on drydock.

In addition, the extra ordinary growth in the steel repair items (well over 50%) did, in fact, adversely affect the original steel work causing substantial overruns in man hours. It is of Northwest Marine's opinion that these cost overruns need to be discussed and compensated for by EXXON.

B. Item 145 Deck Coating

At the time of negotiations of this item, EXXON was informed that there were additional costs to be discussed and agreed to in order to satisfy the deck coating work item.

In the first place, EXXON requested that we change our schedule of blasting and coating to better accommodate how EXXON felt the schedule should be. This change had a cascading effect on all major deck and tank repair items.

Mr. Steve Day
EXXON BATON ROUGE
September 28, 1989
Page two

The running out of house paint delayed painting the section forward of the house due to the possibility of overspray.

Sleeving hydraulic piping rather than renewing affected blasting and coating.

If Northwest Marine had not agreed to blast and coat more of the deck, we wouldn't have ended up reblasting Zone 3 due to weather, yet EXXON doesn't want to assume any responsibility or even share in the costs of reblasting. It kind of sounds like "Do your best for EXXON, but if there's a problem, we (EXXON) don't want to accept any responsibility".

Again, this item was impacted greatly due to work growth on deck items and scheduling change causing cost overruns. These overruns need to be discussed, agreed to, and compensation made to Northwest Marine.

C. Item 172A Hydraulic Piping

Based on two independent estimates, my own and George Riddle's, we both came within four hundred dollars in additional costs to sleeve the piping rather than renewing it. These costs do not include the impact costs of delay and disruption involved in sequencing and scheduling the hydraulic item with other deck work.

Please find enclosed our estimates detailing credits and additional costs.

In consideration of extra days and liquidated damages, the following comments apply:

- A. Early in the project, EXXON was notified in writing that additional days would be required based on the work scope at the time. EXXON refused to recognize that the days requested were legitimate.
- B. Although EXXON cancelled several thousand man hours in items, they were generally items that were not affecting the critical path. In fact, for the most part, the additional work and its release to the yard did affect the critical path and redelivery schedule.
- C. The total work scope increased approximately 100% from arrival to departure. It is standard in the industry to accomplish 20% growth in the same time period, not 100%.
- D. EXXON decided to stay extra days to get all of the deck coating done and ensure that the vessel was ready to depart.

It is Northwest Marine's opinion that every effort was made to accommodate EXXON and deliver the vessel at the earliest possible date. Northwest Marine is currently compiling a final invoice that will include prices for outstanding

Mr. Steve Day
EXXON BATON ROUGE
September 28, 1989
Page three

issue items. We are willing to sit down and discuss these items, however, we would like to be paid the retainage for all agreed items.

Sincerely,

A handwritten signature in cursive script, appearing to read "Ivan Chandler".

Ivan G. Chandler
Project Manager

cc: Herb Leyendecker
Bill Johnston
Don Nugent



NORTHWEST MARINE IRON WORKS

MAILING ADDRESS: P.O. BOX 3109
PORTLAND, OR 97208
5555 N. CHANNEL AVE., BLDG. 2
PORTLAND, OREGON 97217
PHONE: (503) 285-7557
TWX: 910-464-6107 NORMARINE PTL

August 31, 1989

EXXON Shipping Company
800 Bell Street
Houston, Texas 77002-7426

Attention: Mr. H. P. Leyendecker

Subject: EXXON BATON ROUGE

Dear Herb:

In accordance with the contract terms, we have prepared and hereby submit our Progress Billing No. 5.

The estimated contract value is figures negotiated by your repair superintendent, Steve Day. The actual contract value is unknown at this time due to pending negotiations of outstanding items.

Very truly yours,

Ivan G. Chandler
Project Manager

cc: B. Johnston
Steve Day (EXXON Shipping Co.)

NWMAR130861



SHIP REPAIRERS
GENERAL MACHINE WORK
ENGINEERING

NORTHWEST MARINE IRON WORKS

INVOICE

MAIL PAYMENT TO:
P.O. BOX 4000-58
PORTLAND, OREGON 97208

"EXXON BATON ROUGE" and Owners
c/o EXXON Shipping Company
800 Bell Street
Houston, Texas 77002-7426

DATE August 31, 1989
OUR JOB NO. 4705
CUSTOMER'S ORDER NO.
CONTRACT NO.
INVOICE NO. 4705-5
TERMS Net

CUSTOMER CODE NUMBER:

Duns No. 00-902-8580

"EXXON BATON ROUGE"
Progress Billing Number 5

| | |
|----------------------------------|----------------------|
| Contract Value to August 1, 1989 | \$3,802,458.00 |
| Less 20% Retention | (760,492.00) |
| | \$3,041,966.00 |
| Less Progress Payment No. 1 | 584,987.00 |
| Progress Payment No. 2 | 672,415.00 |
| Progress Payment No. 3 | 930,988.00 |
| Progress Payment No. 4 | <u>540,668.00</u> |
| Total Amount Due This Invoice | <u>\$ 312,908.00</u> |

Please wire transfer payment to:

Northwest Marine Iron Works
c/o First Interstate Bank of Oregon
N.W. 29th and Yeon Branch
Portland, Oregon
Account No. 552-001522-9

EXXON Repair Superintendent

Approval _____

PAST DUE PAYMENTS SHALL BEAR INTEREST AT THE HIGHEST LAWFUL RATE UNTIL REPAYED, NOT TO EXCEED 1½% PER MONTH.

CORRESPONDENCE ADDRESS P.O. BOX 3109 PORTLAND, OREGON 97208 PHONE (503) 285-7557

NWMAR130862

EXXON SHIPPING COMPANY

POST OFFICE BOX 1512 • HOUSTON, TEXAS 77251-1512 "EXXSHIP HOUSTON"

ESC FIELD OFFICE c/o NASSCO

P.O. Box 85278, San Diego, CA 92138

August 11, 1989

Northwest Marine Ironworks
P.O. Box 3109
Portland, OR 97208

Attn: Ivan Chandler

Dear Ivan:

I will summarize herein Exxon's position regarding the outstanding issues which need to be resolved for settlement of the Exxon Baton Rouge invoice:

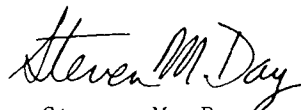
- o Item 101K, FO 189 - steel repair overtime. This item was written to allow the Boilermakers to work two extra hours of overtime on 6/30 swing shift and on 7/1 day shift to complete as much work as possible on #3P-3C Long BHD and #2C CVK Insert. We counted the men working 6/30 swing at 14 men; on 7/1 days we estimate 21 men. I feel that the fair value of this item is \$840.
- o Item 145 - deck coating - As you know, we have agreed on the pricing of this item. I feel that in order to complete the painting in accordance with the specification, you were required to re-blast Zone 3. Exxon considers this item settled.
- o Item 172A As you know, this change was issued to save time and money in completing the deck hydraulic piping rework. I have looked at this item many different ways and still feel that Exxon deserves a substantial credit. Please provide your breakdown showing the credit for not fabricating 11 spools of pipe followed by your estimate of time and material required to sleeve the existing pipe.

We will discuss the extra days and liquidated damages issue after we have reached agreement on the items listed above.

Since I have been reassigned to San Diego, Bob Tompkins will be handling the guarantee repairs on the ship. He can be reached at (707) 745-7493. I strongly recommend that you have a representative attend the vessel on 8/16-19/89 at Anacortes to survey the IGS fans and oversee the reinstallation of "D" cargo pump angle drive.

Please contact me at (619) 544-8699 if you have any questions.

Yours truly,



Steven M. Day
Repair Superintendent

SMD:le

cc: H.P. Leyendecker
S.W. McRobbie
R.G. Tompkins

NWMAR130863



NORTHWEST MARINE IRON WORKS

MAILING ADDRESS: P.O. BOX 3109
PORTLAND, OR 97208
5555 N. CHANNEL AVE., BLDG. 2
PORTLAND, OREGON 97217
PHONE: (503) 285-7557
TWX: 910-464-6107 NORMARINE PTL

July 12, 1989

EXXON Shipping Company
800 Bell Street
Houston, Texas 77002-7426

Attention: Mr. H. P. Leyendecker
Repair Coordinator

Subject: Contract Extension
S.S. "BATON ROUGE"

Gentlemen:

In reference to your letter dated July 10, 1989, we are currently gathering the information required to clearly display that our five (5) day extension request is justified. This presentation will be submitted to you as soon as it is completed.

In response to Paragraph 2 of your letter, the following list is provided which details items which will not be completed prior to 0730 hours on July 16, 1989.

Items 5, 6,
and 7

Cargo and Ballast Deepwell Pumps.

Status: Test deepwell pumps.

Reason: Additional workscope added for repair and preservation of pumps.

Item 33

Hull Coating

Status: Repair hull coating damaged by welding accomplished on cargo tank repair items.

Reason: Additional cargo tank steel repair items.

Item 34-B

Deckhouse Coating

Status: Apply additional coat of paint. See also upper deck coating Item 145.

Reason: Item recently authorized for accomplishment of this work.

Item 36

Cargo Tank Coating

Status: Bulkhead access cut to #3 center tank requires closing, welding out and paint touch-up.

Reason: Additional cargo tank steel repairs delayed completion.

NWMAR130864

Mr. H. P. Leyendecker
S.S. "EXXON BATON ROUGE"
July 12, 1989
Page two

- Item 103 Hull Damage Port Bow
Status: Blast and coat inside and out in forepeak area.
Reason: Additional cargo tank steel repairs caused rescheduling of this item.
- Item 125 W. T. Doors and Hatches
Status: Chalk test and paint touch-up doors and hatches.
Reason: Additional cargo tank steel repairs caused rescheduling of this item. Delay in completion of deckhouse painting due to paint shortage and change order for additional coat of paint also contributing factors.
- Item 127 Lifeboat Weight Test
Status: Accomplish weight test of lifeboats.
Reason: Additional work authorized on lifeboats against Item 126. Delay in final coating of deckhouse has also contributed.
- Item 129 Anchor Chain and Locker
Status: Install anchor and anchor chains.
Reason: Additional work on upper deck and in cargo tanks caused rescheduling and resequencing of this item. Modification in workscope of Item 172 as well as additional upper deck blasting work also contributing factors.
- Item 138 Wireway Covers
Status: Complete installation of wireway covers.
Reason: Additional cargo tank steel repairs caused rescheduling of this item. Resequencing of deck blasting and coating due to additional steel and deck piping work also contributing factor. Change order also received for additional covers.
- Item 141 Handrails and Ladders
Status: Additional cargo tank steel repairs caused rescheduling of this item.
- Item 145 Upper Deck Coating
Status: Complete coating of upper deck.
Reason: Extended duration of cargo tank work caused rescheduling and resequencing of upper deck coating application. Delay in final coating of deckhouse due to paint shortage and change order for additional cost of paint (see Item 34-B) also major factors since deckhouse painting must be complete prior to applying final coat on upper deck. Change orders for piping on upper deck and additional upper deck blasting work also contributing factors.

Mr. H. P. Leyendecker
S.S. "EXXON BATON ROUGE"
July 12, 1989
Page three

Item 172 Deck Hydraulic Piping
 Status: Complete operational test with anchor windlass and
 deck winches.
 Reason: Additional work on upper deck and in cargo tanks
 caused rescheduling and resequencing of this item. Modification
 in workscope of this item as well as additional upper deck
 blasting work also contributing factors.

Item 185 Main Deck Conduit
 Status: Complete test of conduit.
 Reason: Additional work on upper deck and in cargo tanks
 caused rescheduling of this work. Completion of this item also
 delayed due to additional upper deck blasting.

Item 231 Deckhouse Ceiling Panels
 Status: Fabricate and install sheet metal panel in overhead
 of deckhouse.
 Reason: Change order authorizing this work received on
 July 11, 1989.

Please call me if you have any questions regarding this list.

Very truly yours,



Ivan Chandler
Project Manager

cc: Steve Day (EXXON Shipping Company)
Bill Johnston
Don Nugent
Jim Coleman
Bob Kunkel

EXXON SHIPPING COMPANY

POST OFFICE BOX 1512 • HOUSTON, TEXAS 77251-1512 "EXXSHIP HOUSTON"

J. A. TOMPKINS
FLEET SERVICES MANAGER

July 10, 1989

EXXON BATON ROUGE
Shipyard Repairs

Mr. Ivan G. Chandler
Northwest Marine Iron Works
5555 N. Channel Avenue, Bldg. 2
Portland, Oregon 97217

Dear Ivan:

In reference to Mr. G. Lind's letter dated July 6, 1989 requesting five (5) extra repair days above the twenty-two (22) calendar days originally contracted, Exxon is of the opinion you are entitled to only three (3) extra days. The total of twenty-five (25) calendar days should be sufficient to complete all the additional work items issued. It is Exxon's opinion that with the melding of the number of canceled items and extra items, the three (3) additional days are more than adequate to complete the work.

Every effort should be made to complete the work no later than 0730 hours July 16, 1989. Should you disagree with this, you should list in detail the items which cannot be completed on time and the reason.

If you have any questions, do not hesitate to contact Steve Day or me.

Very truly yours,



H. P. Leyendecker
Repair Coordinator

HPL:lc

9836k

cc: Mr. S. M. Day
Mr. D. H. Koops
Mr. S. W. McRobbie
Mr. J. A. Tompkins

NWMAR130867



NORTHWEST MARINE IRON WORKS

MAILING ADDRESS: P.O. BOX 3109
PORTLAND, OR 97208
5555 N. CHANNEL AVE., BLDG. 2
PORTLAND, OREGON 97217
PHONE: (503) 285-7557
TWX: 910-464-6107 NORMARINE PTL

July 6, 1989

Exxon Shipping Company
800 Bell, Room 3409
Houston, TX 77002

Attention: Steve Day
Repair Superintendent

Subject: Contract Extension
S/S "EXXON BATON ROUGE"

Reference: (1) NWMIW Letter Dated 28 June, 1989

Gentlemen:

Northwest Marine Iron Works has an obligation to notify you of any foreseeable delays in redelivery of the vessel. We have already notified you of a three (3) day drydock and contract extension required by the additional steel repair working cargo tanks #1, #2, #3 and #5 port/center/stbd. (See Ref. 1) By rescheduling our original contract work as well as a portion of the change order work, we were able to still undock as originally scheduled. The requirement for a contract extension due to the growth work, though, is still a certainty.

The specific number of additional days required to complete this contract cannot be determined, however until we have the following information:

- a) The completion date of your cargo tank structural survey. This includes identification and authorization of all steel repairs required to be accomplished for the balance of the overhaul.
- b) Identification of which cargo tanks will require blasting and coating.

NWMAR130868

Mr. Steve Day
S/S "EXXON BATON ROUGE"
July 6, 1989
Page Two

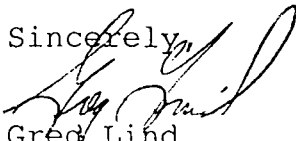
- c) Whether you intend to accomplish the additional flushing of the deck hydraulic system due to the excess contamination discovered at arrival.
- d) If additional upper deck blasting above that required in the original specification will be authorized. If so, when will it be authorized and for what quantity?
- e) Are there any other major impact items that have been identified but have not been authorized?

Due to the interrelationships of these items, it is impossible to attach a specific number of additional days to any one item until the above information is known. The timing and quantity of the work that has been authorized since the vessel's arrival has caused us to reschedule and replan this job numerous times. This in turn has caused us to lose a significant amount of our production efficiency. This includes the release of "hold" items which were authorized after the commencement of production work on this project. The later this growth work is turned on, obviously, the greater its effect on the project. It should be noted that we have currently completed 16 days of the original 22 day contract (73% of original contract time) and we are still receiving a large number of change orders.

We have reviewed the items that have been added to date during this contract with our scheduling department and our production crafts. The results of this meeting were presented to you on July 4, 1989. At that meeting we notified you that the net effect of the additional work is a five (5) day extension to the original contract availability. The new vessel delivery date would now be July 18, 1989 at 0730 hours. The cost of this extension, as well as the impact to the originally scheduled work, has not been included in our Change Order estimated prices. These costs will instead be provided as a separate submittal.

As with the undocking date, we will assuredly attempt to better any completion dates that are proposed to you. Our concern is that we maintain our optimum achievable efficiency and provide you with quality workmanship.

Sincerely,



Greg Lind
Asst. Project Manager

Mr. Steve Day
S/S "EXXON BATON ROUGE"
July 6, 1989
Page Three

cc: Herb Leyendecker (Exxon Shipping Co.)
Bill Johnston
Don Nugent
Ivan Chandler
Jim Coleman
Bob Kunkel

NORTHWEST MARINE IRON WORKS
 JOB 4705 & 4152 - BATON ROUGE
 START DATE: 06/01/89
 FINANCIAL PROJECTION (FULLY BURDENED)
 11/08/89 08:40 AM

PROJECT MGR: CHANDLER
 SHIP SUP: KUNKEL
 COMPLETION DATE: 07/25/89

| | VARIABLE COSTS INCURRED THRU 11/06/89 | ESTIMATED VARIABLE COSTS TO GO | ESTIMATED TOTAL VARIABLE COSTS |
|--------------------------------|---|--------------------------------------|--------------------------------------|
| STD HOURS | 65,000 | 0 | 65,000 |
| OVERTIME HOURS | 27,518 | 0 | 27,518 |
| TOTAL DIRECT HOURS | 92,518 | 0 | 92,518 |
| S/T LABOR DOLLARS | 1,271,752 | 0 | 1,271,752 |
| PREMIUM DOLLARS | 187,609 | 0 | 187,609 |
| MATERIAL | 261,211 | 20,000 | 281,211 |
| SUBCONTRACTS | 176,756 | 0 | 176,756 |
| P OF P - TARIFF | 195,724 | 0 | 195,724 |
| P OF P - USE & REHAB (5.7%) | 192,190 | 50,968 | 243,158 |
| VARIABLE OVHD | 1,009,366 | 0 | 1,009,366 |
| TOTAL VARIABLE COST | 3,294,607 | 70,968 | 3,365,575 |
| | ===== | ===== | ===== |
| | | TOTAL DOLLARS | PER NMIW LABOR HOUR |
| CURRENT CONTRACT PRICE | | 4,704,805 | |
| SETTLED MODS (NOT YET FUNDED) | | 0 | |
| TOTAL ESTIMATED CONTRACT PRICE | | 4,704,805 | 41.16 |
| VARIABLE COST | | (3,365,575) | (26.68) |
| CONTRIBUTION MARGIN | | 1,339,230 | 14.48 |
| FIXED OVERHEAD | | (608,765) | (6.58) |
| GROSS MARGIN | | 730,464 | 7.90 |
| G & A | | (259,974) | (2.81) |
| PROJECTED NET PROFIT (LOSS) | | 470,490 | 5.09 |
| | | ===== | ===== |

NOTE - SOURCE OF PROJECTED COSTS ARE AS FOLLOWS:

| | |
|----------------------------------|-------------|
| S/T LABOR RATE (FROM ACTUAL) | \$13.75 /HR |
| PREMIUM LABOR RATE (FROM ACTUAL) | \$2.03 /HR |
| VARIABLE OVERHEAD (89-C) | \$10.91 /HR |
| FIXED OVERHEAD (89-C) | \$6.58 /HR |
| G & A | \$2.81 /HR |
| BILLED TO DATE: | \$3,801,170 |

NORTHWEST MARINE IRON WORKS
 JOB 4705 & 4152 - BATON ROUGE
 START DATE: 06/01/89
 FINANCIAL PROJECTION (FULLY BURDENED)
 11/07/89 07:03 PM

PROJECT MGR: CHANDLER
 SHIP SUP: KUNKEL
 COMPLETION DATE: 07/25/89

| | VARIABLE COSTS INCURRED THRU 11/06/89 | ESTIMATED VARIABLE COSTS TO GO | ESTIMATED TOTAL VARIABLE COSTS |
|--------------------------------|---|--------------------------------------|--------------------------------------|
| STD HOURS | 65,000 | 0 | 65,000 |
| OVERTIME HOURS | 27,518 | 0 | 27,518 |
| TOTAL DIRECT HOURS | 92,518 | 0 | 92,518 |
| S/T LABOR DOLLARS | 1,271,752 | 0 | 1,271,752 |
| PREMIUM DOLLARS | 187,609 | 0 | 187,609 |
| MATERIAL | 261,211 | 20,000 | 281,211 |
| SUBCONTRACTS | 176,756 | 0 | 176,756 |
| P OF P - TARIFF | 195,724 | 0 | 195,724 |
| P OF P - USE & REHAB (5.7%) | 192,190 | 2,238 | 194,428 |
| VARIABLE OVHD | 1,009,366 | 0 | 1,009,366 |
| TOTAL VARIABLE COST | 3,294,607 | 22,238 | 3,316,845 |
| | ===== | ===== | ===== |
| | | TOTAL DOLLARS | PER NMIW LABOR HOUR |
| | | ----- | ----- |
| CURRENT CONTRACT PRICE | | 3,801,170 | |
| SETTLED MODS (NOT YET FUNDED) | | 0 | |
| TOTAL ESTIMATED CONTRACT PRICE | | 3,801,170 | 31.92 |
| VARIABLE COST | | (3,316,845) | (26.68) |
| CONTRIBUTION MARGIN | | 484,325 | 5.23 |
| FIXED OVERHEAD | | (608,765) | (6.58) |
| GROSS MARGIN | | (124,441) | (1.35) |
| G & A | | (259,974) | (2.81) |
| PROJECTED NET PROFIT (LOSS) | | (384,415) | (4.16) |
| | | ===== | ===== |

NOTE - SOURCE OF PROJECTED COSTS ARE AS FOLLOWS:

| | |
|----------------------------------|-------------|
| S/T LABOR RATE (FROM ACTUAL) | \$13.75 /HR |
| PREMIUM LABOR RATE (FROM ACTUAL) | \$2.03 /HR |
| VARIABLE OVERHEAD (89-C) | \$10.91 /HR |
| FIXED OVERHEAD (89-C) | \$6.58 /HR |
| G & A | \$2.81 /HR |
| BILLED TO DATE: | \$3,801,170 |

Feb

SA 2 1/2 / - new white
2 coats
EPOXY

Exxon Goneth 2004 □'
2-15 to 3-1-90

SD New
SF

New fur. destruct
inmates

Are coats

Time, Price



Exxon

SOUTHWEST MARINE, INC.

SAN DIEGO DIVISION

"Specialists in the Repair,
Modernization and Maintenance
of Seagoing Vessels"

Foot of Sampson St., P.O. Box 13308, San Diego, CA 92113-0308
(619) 238-1000 / Telex: 910-335-1167 (SWM SDG)

Corporate Offices: San Diego

EXHIBIT A**PRICING SCHEDULE**

The following charges shall apply to work done under this Contract.

| | <u>S.D.</u> | <u>S.P.</u> | <u>S.F.</u> |
|-------------------------------|------------------------|-----------------------|----------------------|
| Labor: | | | |
| Straight Time | 35.00/HR | 38.00/HR | 39.00/HR |
| Overtime | 42.00/HR | N/A | N/A |
| Double Time | 49.00/HR | 57.00/HR | 56.50/HR |
| Gangway | 1600.00 | 1600.00 | 1600.00 |
| Telephone | 560.00 + usage | 560.00 + usage | 560.00 + usage |
| Hookup/disconnect shore power | 1600.00 +.135 p/KWH | 1600.00 +.15 p/KWH | 1600.00 +.15 p/KH |
| Hookup/disconnect CHT | 1600.00 | 1600.00 | 1600.00 |
| Crane w/o operator | 125.00/HR | 125.00/HR | 125.00/HR |
| Wharfage | NEGOTIABLE | NEGOTIABLE | NEGOTIABLE |
| Haul Day | 0.42/GRT | 0.42/GRT | 0.42/GRT |
| Lay Day | 0.36/GRT | 0.36/GRT | 0.36/GRT |
| Haul day drydock charge | 5.50/FT | 5.50/FT | 5.50/FT |
| Lay day drydock charge | 4.50/FT | 4.50/FT | 4.50/FT |

Dry dock charge does not include building blocks, line handlers and tugs.

All subcontract work and materials purchased will be invoiced at cost plus 15%

SAN FRANCISCO • P.O. Box 7644 (Pier 28) • San Francisco, CA 94120-7644 • (415) 543-0499

SOUTH PACIFIC BASIN • P.O. Box 1299 • Pago Pago American Samoa 96799 • 011 (684) 633-4123 • Telex: 525 (SWM SB)

SAN PEDRO • 985 So. Seaside • P.O. Box 3600 • Terminal Island, CA 90731-7331 • (213) 519-0600 • Telex: 910-345-6638 (SWM TERM)

SAN DIEGO • Foot of Sampson Street • P.O. Box 13308 • San Diego, CA 92113-0308 • (619) 238-1000 • Telex: 910-335-1167 (SWM SDG)

An Equal Employment Opportunity Employer

NWMAR130874

PHIL - Norm Waller - COPY OF TAPE

Fixed Rate - Better than other off street
Fleet TIEED RATE for Incentive

Name People - Name of Volume

Engr Capabilities connect IT

Answer Plan & Engr - Models -
- Minimum 1 yr Ahead
- Are fixed out C/soc time

Lower Cost Because of Efficient Plan

Minimize Growth & Disruption

6 STIEHL

Model - Reprior

Benefit of Learning

TIME & Cost
Small
Function

EXXON

4 Issues - Add'l MTS
- GAS Free Svcs - 1
- OT on Spec W4ND MTS -
STILL
? - XTRA 4 YD Xtra PIPE

63.021

416.157 ^{so} we closed
AS IMPART

3,801.170 pd to DATE

Growth on Current Items

Deletes -
Non cont
PABX

N_o TIME to Negotiate before

EXXON BATON ROUGE

Impact items due to additional work.

| | <u>Original</u> | <u>Actual</u> | <u></u> |
|--------------------------|-------------------|---------------|---------|
| 001 Services | 3,962 | 5,170 | (1,208) |
| 034 House Coating | 631 (B.E.) | 2,124 | (1,493) |
| 036 Cargo Tank Coating | 2,084 | 2,978 | (894) |
| 101 Steel Repairs | 6,320 | 9,122 | (2,802) |
| 102 Misc. Hull Damage | 638 | 1,111 | (473) |
| 103 Hull Damage Port Bow | 3,199 | 3,811 | (612) |
| 113 Cargo Ppg on Dk | 352 | 741 | (389) |
| 125 WT Doors and Hatches | 1,258 | 1,873 | (615) |
| 131 Dk Stm Pipe Supports | 127 | 243 | (116) |
| 135 Pipe Supports on Dk | 150 | 340 | (190) |
| 145 Upper Dk Coating | 3,224 (all items) | 5,344.5 | (2,121) |
| 172 Hyd. Ppg | 3,349 | 3,685 | (336) |

Total Hours Over Budget

(11,249) hours

11,249 hours @ 35 + 5.7 =

416,157.00

COMMERCIAL ESTIMATE FOR: Exxon Baton Rouge.

BY:

H. Adde

DATE: 9-26-89

PAGE: 1 OF: 2

| ITEM | TITLE/DESCRIPTION/SUB-NAME | TR 1 | PS 2 | MA 3 | RG 4 | BM 5 | PF 6 | EL 7 | FA 9 | WH 11 | CA 12 | SM 15 | LA 17 | TOTAL HRS | MAT'L | SUBS | POP | BID PRICE |
|-------|--|---------|---------|---------|---------|---------|---------|---------|---------|----------|----------|----------|----------|--------------|-------|------|-----|---------------|
| 172-A | Deck Hydraulic Piping | | | | | | | | | | | | | | | | | |
| | (11) sections of 4" sch. 160 pipe with flanged joints. (say 20' av) | | | | | | | | | | | | | | | | | |
| | handle to shop./return. | | | | | | | | | | | | | 10 | - | - | - | |
| | fabricate targets (for exp. ones only) (3) | | | | | | | | | | | | | 12 | 10 | - | - | |
| | fabricate straight sections: (8) | | | | | | | | | | | | | 64 | - | - | - | |
| | 4" sch. 160 pipe 160'-0" x 21" | | | | | | | | | | | | | - | 3360 | - | - | |
| | S.O. flanges (16) x 60" (900lb) | | | | | | | | | | | | | - | 960 | - | - | |
| | fabricate exp. sections (3) | | | | | | | | | | | | | 192 | - | - | - | |
| | 4" sch. 160 pipe 60' x 21" | | | | | | | | | | | | | - | 1260 | - | - | |
| | S.O. flanges (6) x 60" | | | | | | | | | | | | | - | 360 | - | - | |
| | fittings (12) x 38" | | | | | | | | | | | | | - | 456 | - | - | |
| | X-RAY OF WELDS | | | | | | | | | | | | | - | - | 1650 | | |
| | Shop fabrication / NEW. | | | | | | | | | | | | | 278 | 6406 | 1650 | - | |
| | | | | | | | | | | | | | | 30 | - | - | 5.7 | 17,172 CREDIT |
| | PRICE FOR SLEEVEING ARE 26,935 | | | | | | | | | | | | | | | | | |
| | CREDIT FOR NOT BUILDING PIPE (17,172) | | | | | | | | | | | | | | | | | |
| | TOTAL Δ \$ 9,763 | | | | | | | | | | | | | | | | | |
| | ITEM/PAGE TOTALS | | | | | | | | | | | | | | | | | |

PORTLAND, OREGON

COMMERCIAL ESTIMATE FOR: Exxon Baton Rouge

BY: Riddle

DATE:

PAGE: 2 OF: 2

[illegible]

Exxon

Invoice

C157-4 - 364

Rec'd 8/28/92

EXXON SHIPPING COMPANY

POST OFFICE BOX 1512 • HOUSTON, TEXAS 77251-1512 • "EXXSHIP HOUSTON"

M. T. English
Repair Coordination Head

August 24, 1992

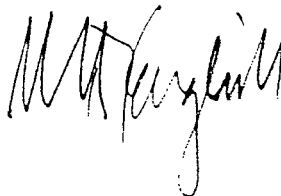
EXXON GALVESTON and JAMESTOWN

Mr. Don Nugent
Northwest Marine
5555 N. Channel Avenue, Bldg. 2
Portland, Oregon 97217

Gentlemen:

We regret to advise you that Cascade General (Portland, Oregon) has been selected for the 1992 Biennial Drydocking and Overhaul of the EXXON GALVESTON and JAMESTOWN described in our June 25, 1992 invitation to you. All proposals were carefully studied before reaching this conclusion. We appreciate the effort expended by your company to prepare your proposal for this work. If you feel it would be desirable, we would be glad to discuss your proposal with you at a mutually convenient time and place. You can be assured that we will consider you in the future for similar requirements.

Sincerely,



MTE:lg
L:\USERS\IMRCLHC\WINWORD\SHIPYARD\LHCGJREG\LHCGJRGL

NWMAR130881

ADVANCE PLANNING SCHEDULE

EVENT

- | <u>NO.</u> | | |
|------------|--|---|
| 1. | NOTIFICATION OF AWARD | - CUSTOMER NOTIFIES N.W.M. THROUGH ONE OF THE FOLLOWING: <ul style="list-style-type: none">•SALES•ESTIMATING•COMMERCIAL ACCOUNT MANAGER (C.A.M). |
| | ASSIGNMENT JOB ORDER NUMBER | - PRODUCTION CLERK RESPONSIBILITY. |
| 2. | ASSIGN COMMERCIAL ACCOUNT MANAGER (C.A.M.) | - OPERATIONS MANAGER RESPONSIBILITY. |
| | ASSIGN SHIP SUPERINTENDENT | - PRODUCTION MANAGER RESPONSIBILITY. |
| | RESERVE BERTH AND DRYDOCK | - OPERATIONS MANAGER RESPONSIBILITY. |
| 3. | TURN OVER BID PACKAGE TO COMMERCIAL ACCOUNT MANAGER (C.A.M.) /LEAD SHIP SUPERINTENDENT (L.S.S) | - CHIEF ESTIMATOR TO INITIATE MEETING <ul style="list-style-type: none">•TO INCLUDE WORK ITEM ESTIMATE•SUBCONTRACTOR QUOTES•LLTM•BID QUESTIONS/ANSWERS•OVERVIEW SPECIAL REQUIREMENTS•DISCUSS ESTIMATORS' INTERPRETATION OF WORK SCOPE. |
| 4. | REFORMAT SPECIFICATIONS-ASSIGN N.W.M. WORK ITEM NUMBERS | - DOCUMENT CONTROL SUPERVISOR RESPONSIBILITY <ul style="list-style-type: none">•RECEIVE DISK FROM OWNER OR SCAN ORIGINALS. |
| | DEVELOP SPECIFICATION INDEX | - C.A.M. TO ESTABLISH WORK ITEM IDENTIFICATION NUMBERS/CUSTOMER NEEDS TO BE CONSIDERED <ul style="list-style-type: none">•CAPITAL IMPROVEMENT•INSURANCE CLAIM•M&R ITEMS. |
| 5. | DEVELOP PLANNING SCHEDULE AND BUDGET (AWARD TO ARRIVAL) | - C.A.M./L.S.S TO DEVELOP. |
| | | - C.A.M. TO OPEN WORK ITEM AND PROVIDE BUDGET. |
| | | - L.S.S. TO CONTROL EXPENDITURE OF BUDGET. |
| | | - BUDGET/SCHEDULE TO REFLECT COMPLEXITY AND DURATION OF CONTRACT. |

ADVANCE PLANNING SCHEDULE

EVENT NO.

6. MARK CRAFT RESPONSIBILITY/
DEVELOP LEAD SHEET
- SHIP SUPERINTENDENT RESPONSIBILITY UTILIZING SPECIFICATIONS DEVELOPED IN STEP NO. 4.
 - STANDARD MARK-UP OF SPECIFICATIONS AID CRAFT SUPERVISION IN UNDERSTANDING AND IDENTIFYING THEIR AREAS OF RESPONSIBILITY AS WELL AS WHAT WILL BE ACCOMPLISHED BY OTHER CRAFTS/SUBCONTRACTORS.
 - LEAD SHEET DEVELOPED FROM SPECIFICATION MARK UP.
- DISTRIBUTE SPECIFICATIONS
- DOCUMENT CONTROL SUPERVISOR RESPONSIBILITY
 - NORMAL DISTRIBUTION TO CRAFTS - 57 SETS
 - REGULATORY BODIES (ABS AND USCG)
 - OWNER'S REPRESENTATIVES/VESSEL
 - MAJOR SUBCONTRACTORS.
7. PERFORM MAKE/BUY SELECTIONS
WRITE SUBCONTRACTOR PURCHASE ORDERS
- PRODUCTION DEPARTMENT RESPONSIBILITY WORKING WITH C.A.M. ASSIGNED THE PROJECT.
 - MAKE/BUY DECISION PROCESS TAKES INTO CONSIDERATION:
 - COMPLEXITY OF TASK/WORK ITEM MAY REQUIRE SPECIAL TOOLING OR EXPERTISE.
 - SHOP WORK LOAD AT THE TIME.
 - MANPOWER AVAILABLE.
 - OVERALL COST OF PERFORMANCE.
 - SHIP SUPERINTENDENT INITIATES SUBCONTRACTOR PURCHASE ORDER.
 - CONTRACTS DEPARTMENT VERIFIES SUBCONTRACTOR INSURANCE REQUIREMENTS HAVE BEEN MET.
 - PURCHASING DEPARTMENT AUTHORIZES PURCHASE ORDER AND FORWARDS TO SELECTED SUBCONTRACTOR.
8. DEVELOP ENGINEERING DRAWINGS AND/OR
ADDITIONAL SPECIFICATIONS
- NORMALLY DONE AT OWNER'S REQUEST.
 - RESIDENT NAVAL ARCHITECT TO BE RESPONSIBLE TO COORDINATE AND MANAGE OUTSIDE ENGINEERING SERVICES.

ADVANCE PLANNING SCHEDULE

EVENT NO.

9. DEVELOP SCHEDULE NETWORKS AND
GANTT CHARTS

- SCHEDULER ASSIGNED WILL PROVIDE
 - 1) INITIAL MILESTONE/KEY EVENT NETWORK.
 - 2) PRELIMINARY WORK ITEM NETWORKS GROUPED BY LIKE WORK, ZONES OR SYSTEM.
 - 3) UPDATED NETWORKS AND GANTTS AS REQUESTED.

10. DESIGNATE PROJECT FOREMEN

- FOREMEN ARE DESIGNATED AND DEDICATED (AS REQUIRED) IN THE PRE-ARRIVAL PLANNING PHASE AND SEE THE PROJECT THROUGH COMPLETION.
- FOREMEN ARE SELECTED GIVING SPECIAL ATTENTION TO THEIR INDIVIDUAL AREAS OF EXPERTISE AND THE COMPLEXITY AND NUANCES WITHIN THE PROJECT.
- FOREMEN DEVELOP A CRAFT STRUCTURE OF SUPERVISION WHICH NOT ONLY INCLUDES THEIR LEADMEN BUT ALSO THE SUPERVISION WHO IS GOING TO BE INVOLVED WITH THEIR PROJECT ON 2ND AND 3RD SHIFT FROM THEIR RESPECTIVE CRAFTS.

11. IDENTIFY AND PROCURE LONG LEAD
TIME MATERIAL

- INITIAL LISTING RECEIVED FROM ESTIMATING AT STEP NO. 3.
- CRAFT FOREMEN SCAN SPECIFICATIONS FOR ADDITIONAL CANDIDATES.
- COMPLETE REQUISITIONS AND ACTIVATE PURCHASING DEPARTMENT.

ADVANCE PLANNING SCHEDULE

EVENT

NO.

12. ASSEMBLE ALL CRAFTS FOR INITIAL SCOPING CONFERENCE

- L.S.S. TO ORGANIZE MEETING.
- DISCUSS GENERAL OVERVIEW OF JOB.
- DISTRIBUTION OF INITIAL PRODUCTION SCHEDULES.
- DISCUSS OWNER'S UPDATES/ADDITIONS/DELETIONS.
- THE WORK ITEMS ARE TALKED THROUGH ONE AT A TIME TO ENSURE THERE IS A COMPREHENSIVE UNDERSTANDING OF THE PROJECT BY ALL CRAFT SUPERVISORS.
- THE CONFERENCE IS ALSO AN OPPORTUNITY FOR INTER-CRAFT COMMUNICATION RELATIVE TO SUPPORT NEEDS. MAJOR SUBCONTRACTORS ARE PRESENT FOR INTERACTION WITH N.W.M. CRAFTS.
- IT ALSO PRESENTS A FORUM FOR EARLY IDENTIFICATION OF INTERFACE PROBLEMS.
- SHIP'S EVOLUTIONS AND SERVICE NEEDS ARE GIVEN SPECIAL ATTENTION AT THIS TIME AS WELL.
- THE NEED FOR ADDITIONAL SHIPCHECKS ARE DISCUSSED AT THIS TIME.
- AT THIS POINT IT IS MOST DESIRABLE TO HAVE THE OWNER'S REPRESENTATIVE AVAILABLE TO INTERFACE WITH THE ENTIRE PRODUCTION EFFORT

13. ORDER OUTSTANDING CONTRACTOR FURNISHED MATERIAL

- CRAFT FOREMEN COMPLETE REQUISITIONS FOR PROCUREMENT OF REMAINING MATERIAL.
- PURCHASING DEPARTMENT SHOPS FOR BEST AVAILABILITY AND PRICE.
- ALL CONTRACTOR FURNISHED MATERIAL THAT IS IDENTIFIABLE IN PRE-PLANNING IS ORDERED WITH NEED DATES THAT SUPPORT THE PRODUCTION SCHEDULE.
- MATERIAL STATUS IS TRACKED BY THE CRAFT THROUGH MATERIAL STATUS REPORTS AND RECEIVING LOGS ON A DAILY BASIS.

ADVANCE PLANNING SCHEDULE

EVENT NO.

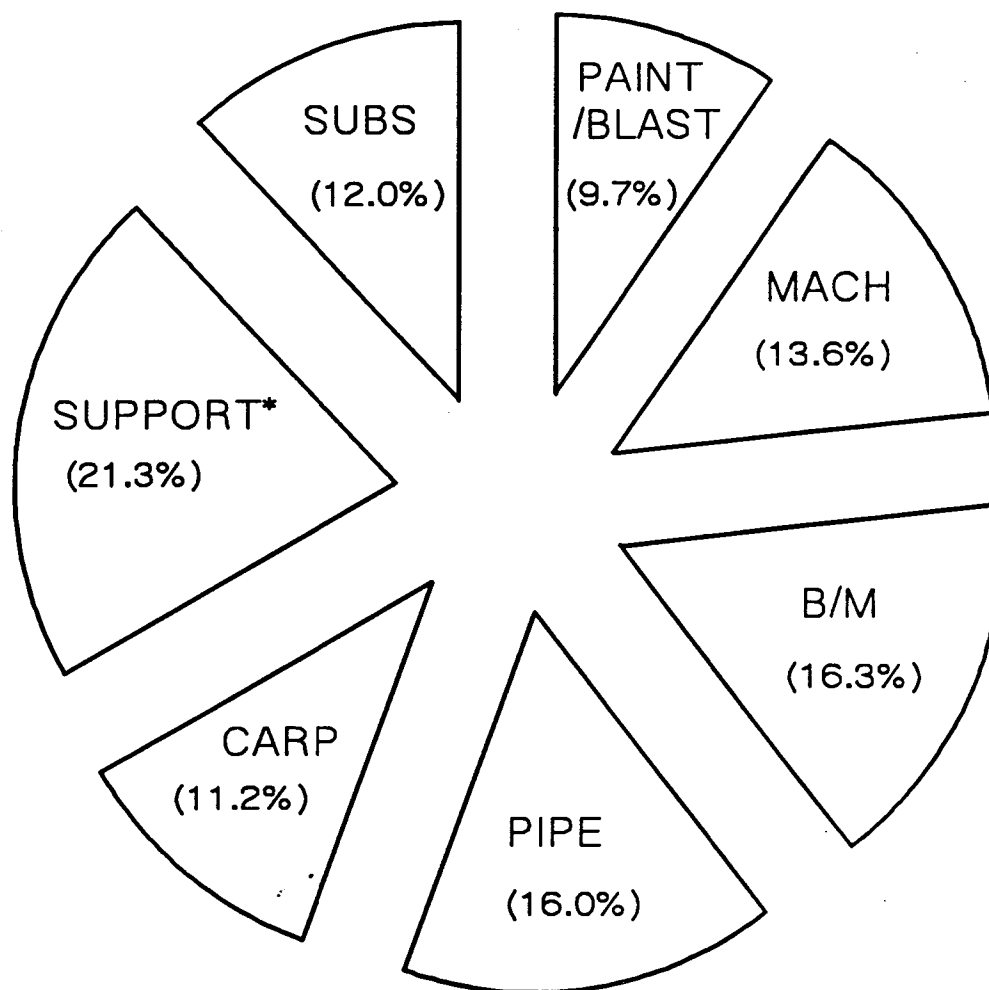
- | | |
|--|---|
| 14. ASSEMBLE CRAFTS FOR SCHEDULE AND BUDGET REVIEW | <ul style="list-style-type: none">- PROJECT MANAGEMENT TEAM PLUS CRAFT FOREMEN REVIEW FINAL INPUTS INTO SCHEDULE AND BUDGETS.- ADDITIONAL UPDATE FROM OWNER'S REPRESENTATIVE.- SUBCONTRACTORS ARE PRESENT FOR SCHEDULING. |
| | |
| 15. DEVELOP PROJECT TASK SCHEDULE GRAPHS | <ul style="list-style-type: none">- PRODUCTION FOREMEN AND PLANNERS' RESPONSIBILITY.- THE NEXT LOWER LEVEL OF DETAIL FROM THE PRODUCTION BUDGET AND SCHEDULE IS THE P.T.S.G. THE CRAFTS DEVELOP A TWO WEEK WINDOW TO THE ACTIVITY LEVEL WHICH REFLECTS THE CURRENT SCHEDULE AND BUDGET. THE RESULT IS A "TIME NOW" RESOURCE ALLOCATION.- P.T.S.Gs. ARE MAINTAINED THROUGHOUT THE PROJECT WITH A CURRENT ONE TO TWO WEEK WINDOW AND ACCOMMODATE ANY CHANGES IN THE WORK PACKAGE. |
| | |
| 16. UPLOAD PRODUCTION BUDGET TO THE VAX | <ul style="list-style-type: none">- START OF AVAILABLE BUDGET INTRODUCED INTO CORPORATE MAINFRAME (RESULT OF STEP NO. 14).- TIME CHARGING PROCESS NOW AVAILABLE.- ALL MIS SYSTEMS COME ON LINE FOR GIVEN JOB. |
| | |
| 17. LOAD RESOURCES TO PRODUCTION SCHEDULE | <ul style="list-style-type: none">- BUDGET (STEP NO. 14) LOADED INTO COST SIDE OF PRODUCTION SCHEDULE SOFTWARE.- PROJECT MANAGEMENT TOOLS AVAILABLE (EAC-RESOURCE CURVES). |

ADVANCE PLANNING SCHEDULE

EVENT NO.

- | | | | |
|-----|---|---|--|
| 18. | DISTRIBUTE PRODUCTION SCHEDULE AND MANPOWER REQUIREMENTS | - | AGREED UPON SCHEDULE WITH INPUTS FROM MANAGEMENT, CRAFTS, CUSTOMER. |
| 19. | SHIP ARRIVAL | - | EXECUTION OF PLAN. |

TYPICAL TANKER REPAIR CRAFT LOADING



BASED ON 475 MEN/DAY, 25 day duration (95K HOURS) **

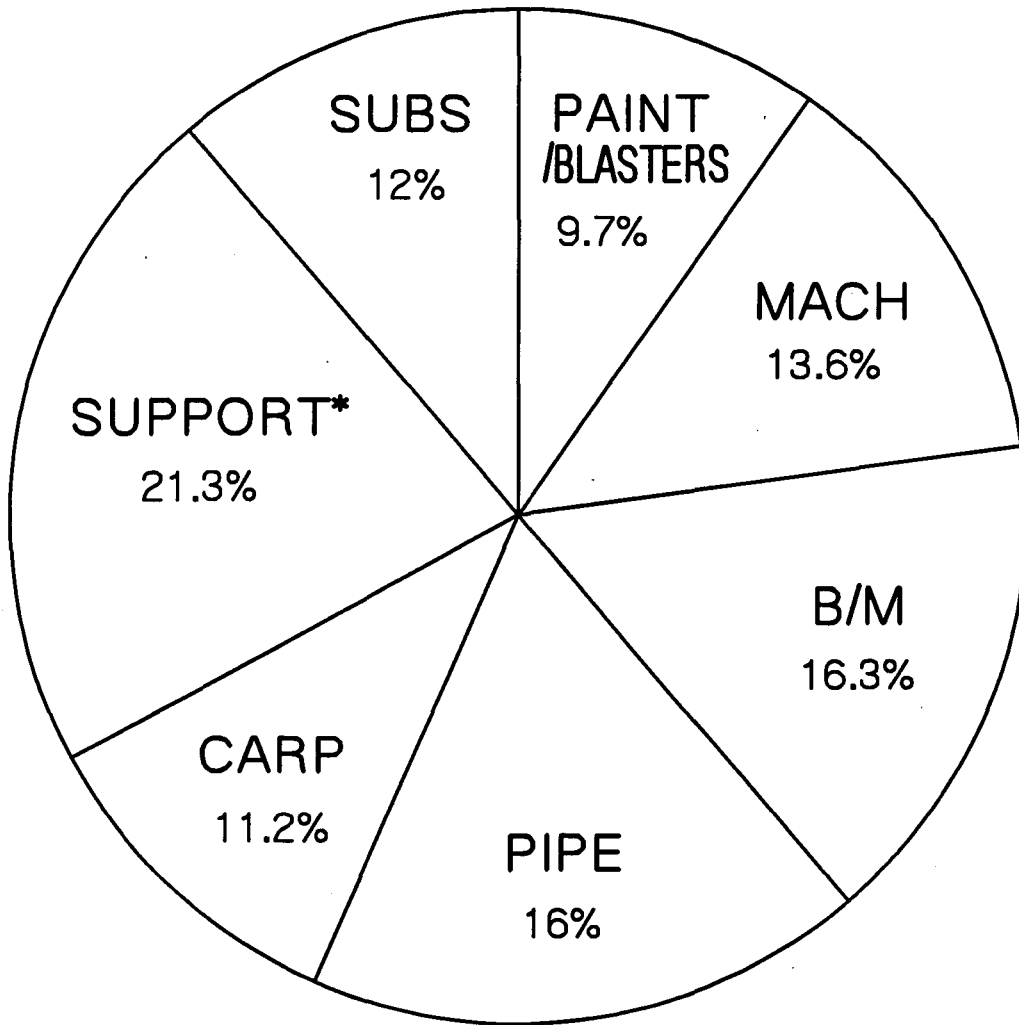
| CRAFT | PAINT | MACH | B/M | PIPE | CARP | SUPPORT | SUBS |
|---------------------------------------|-------|------|-----|------|------|---------|------|
| AVERAGE MEN/DAY | 46 | 65 | 77 | 76 | 53 | 101 | 57 |
| PEAK MEN/DAY | 83 | 101 | 120 | 110 | 88 | 120 | 102 |
| TOTAL AVAILABLE FROM LOCAL LABOR POOL | 200 | 550 | 880 | 300 | 300 | 300 | |

* SUPPORT = RIGGERS,ELECTRICIANS, SHEETMETAL,LABORERS

** DATA COMPILED FROM ACTUAL PERFORMANCE ON TANKERS RECENTLY REPAIRED AT NORTHWEST MARINE:

- ARCO ANCHORAGE
- ARCO CALIFORNIA
- EXXON BENICIA

TYPICAL TANKER REPAIR CRAFT LOADING



BASED ON 475 MEN/DAY (95K HOURS) **

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|-----------------|-------|------|-----|------|------|---------|------|
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** DATA COMPILED FROM ACTUAL PERFORMANCE ON TANKERS
RECENTLY REPAIRED AT NORTHWEST MARINE:

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TYPICAL DAY TO DAY ACTIVITIES

SAFETY:

- o Daily housekeeping tours of vessel; reports generated forwarded to Lead Ship Supt. for correction of any deficiencies and to customer for information.
- o Competent persons maintain gas free certifications by means of regular inspections of work sites.
- o Monitor work practices of NWM employees during course of regular walk-throughs of vessel work sites
- o Perform surveys and maintain historical records for:
 - excessive noise
 - excessive weld smoke
 - lead contamination
 - asbestos exposure
 - benzene exposure
 - others as needed
- o Monitor NWM compliance with applicable OSHA (State & Federal) regulations
- o Monitor men-in-tank "Tank Boards" to ascertain current locations of NWM work efforts

QUALITY ASSURANCE:

- o Monitor structural, pipefitter, and sheetmetal departments compliance with NWM welding standards and procedures:
 - proper application
 - trained & certified personnel
 - proper weld supplies and materials
- o Oversee machine shop "open & inspect" processes. Witness dimensional checks as required. Ensure use of calibrated measuring devices
- o Witness shop & shipboard hydrostatic and operational testing

STAGES OF A PROJECT

- I. SOLICITATION TO AWARD**
- II. AWARD TO ARRIVAL**
Advance Planning Schedule
- III. ARRIVAL TO DELIVERY**
- IV. PROJECT CLOSE OUT AND FOLLOW UP**
Invoicing (Final Negotiations)
Customer Follow Up

ADVANCE PLANNING SCHEDULE

EVENT NO.

- | | | | |
|----|--|---|---|
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| | | - | C.A.M./L.S.S. MAKE CONTACT WITH OWNER'S REPRESENTATIVE TO DISCUSS SCOPE OF PROJECT. |
| 4. | REFORMAT SPECIFICATIONS-ASSIGN N.W.M. WORK ITEM NUMBERS | - | DOCUMENT CONTROL SUPERVISOR RESPONSIBILITY <ul style="list-style-type: none">•RECEIVE DISK FROM OWNER OR SCAN ORIGINALS. |
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ADVANCE PLANNING SCHEDULE

EVENT NO.

6. MARK CRAFT RESPONSIBILITY/
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 - PURCHASING DEPARTMENT AUTHORIZES PURCHASE ORDER AND FORWARDS TO SELECTED SUBCONTRACTOR.
8. DEVELOP ENGINEERING DRAWINGS AND/OR
ADDITIONAL SPECIFICATIONS
- NORMALLY DONE AT OWNER'S REQUEST.
 - RESIDENT NAVAL ARCHITECT TO BE RESPONSIBLE TO COORDINATE AND MANAGE OUTSIDE ENGINEERING SERVICES.

ADVANCE PLANNING SCHEDULE

EVENT

NO.

9. DEVELOP SCHEDULE NETWORKS AND GANTT CHARTS

- SCHEDULER ASSIGNED WILL PROVIDE
 - 1) INITIAL MILESTONE/KEY EVENT NETWORK.
 - 2) PRELIMINARY WORK ITEM NETWORKS GROUPED BY LIKE WORK, ZONES OR SYSTEM.
 - 3) UPDATED NETWORKS AND GANTTS AS REQUESTED.

10. DESIGNATE PROJECT FOREMEN

- FOREMEN ARE DESIGNATED AND DEDICATED (AS REQUIRED) IN THE PRE-ARRIVAL PLANNING PHASE AND SEE THE PROJECT THROUGH COMPLETION.
- FOREMEN ARE SELECTED GIVING SPECIAL ATTENTION TO THEIR INDIVIDUAL AREAS OF EXPERTISE AND THE COMPLEXITY AND NUANCES WITHIN THE PROJECT.
- FOREMEN DEVELOP A CRAFT STRUCTURE OF SUPERVISION WHICH NOT ONLY INCLUDES THEIR LEADMEN BUT ALSO THE SUPERVISION WHO IS GOING TO BE INVOLVED WITH THEIR PROJECT ON 2ND AND 3RD SHIFT FROM THEIR RESPECTIVE CRAFTS.

11. IDENTIFY AND PROCURE LONG LEAD TIME MATERIAL

- INITIAL LISTING RECEIVED FROM ESTIMATING AT STEP NO. 3.
- CRAFT FOREMEN SCAN SPECIFICATIONS FOR ADDITIONAL CANDIDATES.
- COMPLETE REQUISITIONS AND ACTIVATE PURCHASING DEPARTMENT.

ADVANCE PLANNING SCHEDULE

EVENT

NO.

12. ASSEMBLE ALL CRAFTS FOR INITIAL SCOPING CONFERENCE

- L.S.S. TO ORGANIZE MEETING.
- DISCUSS GENERAL OVERVIEW OF JOB.
- DISTRIBUTION OF INITIAL PRODUCTION SCHEDULES.
- DISCUSS OWNER'S UPDATES/ADDITIONS/DELETIONS.
- THE WORK ITEMS ARE TALKED THROUGH ONE AT A TIME TO ENSURE THERE IS A COMPREHENSIVE UNDERSTANDING OF THE PROJECT BY ALL CRAFT SUPERVISORS.
- THE CONFERENCE IS ALSO AN OPPORTUNITY FOR INTER-CRAFT COMMUNICATION RELATIVE TO SUPPORT NEEDS. MAJOR SUBCONTRACTORS ARE PRESENT FOR INTERACTION WITH N.W.M. CRAFTS.
- IT ALSO PRESENTS A FORUM FOR EARLY IDENTIFICATION OF INTERFACE PROBLEMS.
- SHIP'S EVOLUTIONS AND SERVICE NEEDS ARE GIVEN SPECIAL ATTENTION AT THIS TIME AS WELL.
- THE NEED FOR ADDITIONAL SHIPCHECKS ARE DISCUSSED AT THIS TIME.
- AT THIS POINT IT IS MOST DESIRABLE TO HAVE THE OWNER'S REPRESENTATIVE AVAILABLE TO INTERFACE WITH THE ENTIRE PRODUCTION EFFORT

13. ORDER OUTSTANDING CONTRACTOR FURNISHED MATERIAL

- CRAFT FOREMEN COMPLETE REQUISITIONS FOR PROCUREMENT OF REMAINING MATERIAL.
- PURCHASING DEPARTMENT SHOPS FOR BEST AVAILABILITY AND PRICE.
- ALL CONTRACTOR FURNISHED MATERIAL THAT IS IDENTIFIABLE IN PRE-PLANNING IS ORDERED WITH NEED DATES THAT SUPPORT THE PRODUCTION SCHEDULE.
- MATERIAL STATUS IS TRACKED BY THE CRAFT THROUGH MATERIAL STATUS REPORTS AND RECEIVING LOGS ON A DAILY BASIS.

ADVANCE PLANNING SCHEDULE

EVENT NO.

- | | |
|--|---|
| 14. ASSEMBLE CRAFTS FOR SCHEDULE AND BUDGET REVIEW | <ul style="list-style-type: none">- PROJECT MANAGEMENT TEAM PLUS CRAFT FOREMEN REVIEW FINAL INPUTS INTO SCHEDULE AND BUDGETS.- ADDITIONAL UPDATE FROM OWNER'S REPRESENTATIVE.- SUBCONTRACTORS ARE PRESENT FOR SCHEDULING. |
| | |
| 15. DEVELOP PROJECT TASK SCHEDULE GRAPHS | <ul style="list-style-type: none">- PRODUCTION FOREMEN AND PLANNERS' RESPONSIBILITY.- THE NEXT LOWER LEVEL OF DETAIL FROM THE PRODUCTION BUDGET AND SCHEDULE IS THE P.T.S.G. THE CRAFTS DEVELOP A TWO WEEK WINDOW TO THE ACTIVITY LEVEL WHICH REFLECTS THE CURRENT SCHEDULE AND BUDGET. THE RESULT IS A "TIME NOW" RESOURCE ALLOCATION.- P.T.S.Gs. ARE MAINTAINED THROUGHOUT THE PROJECT WITH A CURRENT ONE TO TWO WEEK WINDOW AND ACCOMMODATE ANY CHANGES IN THE WORK PACKAGE. |
| | |
| 16. UPLOAD PRODUCTION BUDGET TO THE VAX | <ul style="list-style-type: none">- START OF AVAILABLE BUDGET INTRODUCED INTO CORPORATE MAINFRAME (RESULT OF STEP NO. 14).- TIME CHARGING PROCESS NOW AVAILABLE.- ALL MIS SYSTEMS COME ON LINE FOR GIVEN JOB. |
| | |
| 17. LOAD RESOURCES TO PRODUCTION SCHEDULE | <ul style="list-style-type: none">- BUDGET (STEP NO. 14) LOADED INTO COST SIDE OF PRODUCTION SCHEDULE SOFTWARE.- PROJECT MANAGEMENT TOOLS AVAILABLE (EAC-RESOURCE CURVES). |

ADVANCE PLANNING SCHEDULE

EVENT

NO.

- | | | | |
|-----|---|---|--|
| 18. | DISTRIBUTE PRODUCTION SCHEDULE AND MANPOWER REQUIREMENTS | - | AGREED UPON SCHEDULE WITH INPUTS FROM MANAGEMENT, CRAFTS, CUSTOMER. |
| 19. | SHIP ARRIVAL | - | EXECUTION OF PLAN. |

NORTHWEST MARINE
SUBCONTRACTOR LISTING
23 JANUARY 1992

1. BLASTING/COATING

- A. BLASTCO, INC.
6117 NE PORTLAND HWY
PORTLAND, OR 97218
- B. SIPCO SERVICE AND MARINE, INC. *
7702 FM 1960 E., SUITE 100
HUMBLE, TX 77346
- C. COASTAL COATINGS, INC. *
P.O. 77043
SEATTLE, WA 98177
- D. STAGEBLAST
5300 N. CHANNEL AVE
PORTLAND, OR 97217

2. BOILER REPAIRS

- A. CH MURPHY/CLARK-ULLMAN
5565 N. DOLPHIN ST.
PORTLAND, OR 97217
- B. FRASER BOILER & DIESEL ENGIN SERVICE
2412 N. MISSISSIPPI
PORTLAND, OR 97217
- C. WALASHEK INDUSTRIES
5555 N. CHANNEL AVE., BLDG 10
PORTLAND, OR 97217
- D. TRANSWORLD INDUSTRIES *
2407 INGLESIDE ROAD
NORFOLK, VA 23513

3. ELECTRIC MOTOR REPAIR

- A. EC DISTRIBUTING
P.O. BOX 10286
PORTLAND, OR 97210
- B. EASTERN ELECTRIC APPARATUS
9442 N. RAMSEY BLVD.
PORTLAND, OR 97203

C. PACIFIC ELECTRIC
1009 W 13TH STREET
VANCOUVER, WA 98660

D. RELIANCE ELECTRIC
2315 NW 21ST PLACE
PORTLAND, OR

4. ROTATING EQUIPMENT REPAIR AND BALANCING

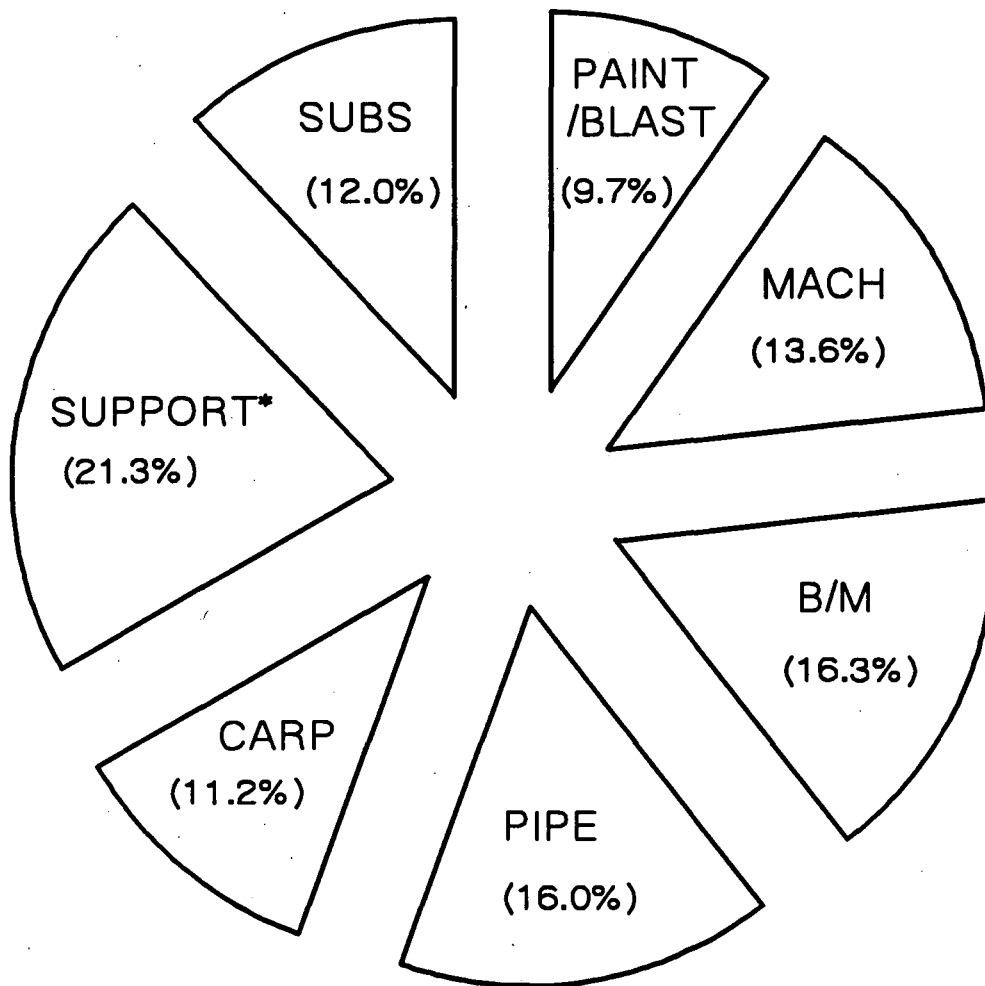
A. MARINE PROPULSION SERVICE
5555 N. CHANNEL AVE., BLDG 50
PORTLAND, OR 97217

B. GOULDS PUMPS, INC.
7100 SW SANDBURG ST.
TIGARD, OR 97223

C. EC DISTRIBUTING
P.O. BOX 10286
PORTLAND, OR 97210

NOTE: * These companies open offices at the jobsite on
as needed basis.

TYPICAL TANKER REPAIR CRAFT LOADING



BASED ON 475 MEN/DAY, 25 day duration (95K HOURS) **

| CRAFT | PAINT | MACH | B/M | PIPE | CARP | SUPPORT | SUBS |
|---------------------------------------|-------|------|-----|------|------|---------|------|
| AVERAGE MEN/DAY | 46 | 65 | 77 | 76 | 53 | 101 | 57 |
| PEAK MEN/DAY | 83 | 101 | 120 | 110 | 88 | 120 | 102 |
| TOTAL AVAILABLE FROM LOCAL LABOR POOL | 200 | 550 | 880 | 300 | 300 | 300 | |

* SUPPORT = RIGGERS,ELECTRICIANS, SHEETMETAL,LABORERS

** DATA COMPILED FROM ACTUAL PERFORMANCE ON TANKERS RECENTLY REPAIRED AT NORTHWEST MARINE:

- ARCO ANCHORAGE
- ARCO CALIFORNIA
- EXXON BENICIA



December 27, 1991

Mike English
Repair Coordination Head
Exxon Shipping Company
800 Bell Street, Room 3407
Houston, Texas 77002

Dear Mike:

I am replying on behalf of Southwest Marine and Northwest Marine regarding your questions of December 13, 1991 which relate to a future solicitation for work on EXXON NORTH SLOPE:

1. Northwest Marine is prepared to submit a competitive firm fixed price proposal for the upcoming yard period on the EXXON NORTH SLOPE. As I noted in my recent proposal to you, the areas where we see room for improvement are generally deal with accurate definition of the work which drives our ability to effectively plan, schedule and execute the work. The most important comments we would make in this writing have to do with encouraging you to maximize the amount of time between contractor selection and physical arrival of the ship. The more time we have to survey and work with your people refining the work package, the more effective our company will be in the work place. Your costs will come down and our potential for profit will go up.

2. Our company has a four facility network of shipyards which allows us to mobilize resources wherever and whenever they are needed. These resources are not limited to the physical planning, scheduling and execution of work tasks. We have the ability to estimate jobs and prepare project proposals well within the preparation time of six weeks.

3. Our company plans to utilize Port of Portland Drydock No. 4 for lifting EXXON NORTH SLOPE. Drydock No. 4 is the largest drydock on the North American West Coast and the largest floating drydock on the Pacific Rim. It serves ships to 275,000 dwt. Drydock No. 4 was placed in service in March 1979. It is designed to serve the largest ships trading in the Pacific. It possesses the following characteristics:

6' 0" Minimum Block Height
Drive On Ramp -- Highway Rated
5 Worker Access Ramps
3 Wing Wall Access Stairs
Pontoon Deck and Wing Wall Lighting
(Continues on next page)
Lift Capacity 87,000 Long Tons (82,296 Metric Tons) Maximum Length Overall: 982 Feet (299.3 Meters)
Clear Width: 185 Feet (56.4 Meters)
Length Over Keel Blocks: 902 Feet (274.9 Meters)
Depth Over Keel Blocks: 35 Feet (10.7 Meters)
Crane Service from Cranes 11, 12, 14 and 15 up to 134 Tons and Traveling Man Lift Stages
Combined Lift Capacity to 246 Tons

4. Because of the vessel size limitation which restricts us to our Portland facility for EXXON NORTH SLOPE, I am enclosing the projected work load for our Portland facility, Northwest Marine. Attachment I shows Portland's projected business plan and anticipated schedule for commercial work. There is no work firm booked in the time frame currently scheduled for EXXON NORTH SLOPE. What other work may present itself can be easily handled through proper resource allocation. If you award us EXXON NORTH SLOPE, we will select our project team together. If it becomes an integral part of an award discussion, we will discuss with you appropriate limits on other projects in our Portland facility during EXXON NORTH SLOPE'S yard period.

5. Refer again to Attachment I for work that we anticipate. We do not see 1992 as a big year in our Portland shipyard. Right now the bidding activity is at the low end of the normal range. We do not expect to see it grow much beyond this level.

6. Northwest Marine has historically had significant seniority lists. We believe we have enough people in our seniority lists and people available for recall to more than meet the requirements for EXXON NORTH SLOPE. There are significant numbers of people available through the local hiring halls to augment our seniority lists. We also have available to us the resources of our three California shipyards. In addition to the equipment, tool and material availability, we can draw from over 3,000 additional qualified journeyman shipyard workers and supervision already employed by our company, to augment Northwest Marine's Portland shipyard personnel. Our Current Seniority Roster is as follows (All Union Employees):

| | |
|---|-----|
| Pipefitters | 99 |
| Machinists | 112 |
| Boilermakers (Including Fitters & Welders) | 161 |
| Electricians | 15 |
| Blasters | 12 |
| Coaters (Painters) | 25 |
| Riggers | 45 |
| Sheet Metal | 66 |
| Laborers | 57 |

7. Northwest Marine and Southwest Marine normally attempt to minimize the quantity of subcontractor work to maintain as high a level of control on the project as possible. Since it is not cost effective to do everything ourselves, however, we generally seek outside support in the following areas on 165,000 dwt tankers:

Marine Chemists

NDT Gauging Services

Note: Northwest Marine Performs some Mag Port Testing

Based on our work load, some Inside Machinery Services:

i.e. Valve Machining, Shaft Machining, Bushing Machining

Setting and Certification of Boiler Safety Valves

Tank Blasting and Coating

Propeller Repairs

IGS Boiler Automation Survey and Testing

Cathodic Protection Equipment Survey and Testing

Stern Shaft Seals and Service Work

(Continues on next page)

Page 3 to Mike English
December 27, 1991

(Areas for selected outside support continues)

Borescope Inspections
Fan Balancing, Rotating Element Balancing
Electric Motor Repairs
Boiler Work

Note: Water Wash, Open, Inspect and Hydros are Performed by Northwest Marine
Winch Brake Bank Lining Renewal
Re-swedge Mooring Wire
Radar Navigation Electronics Work

8. During the last decade Northwest Marine has done numerous repair availabilities on the 165,000 dwt class of tankers. We have probably done more than 100 separate projects. We have listed below the work we have done over the last 2 1/2 years during Southwest Marine's ownership of Northwest Marine. Our most extensive project on this class was the capacity reduction of the Keystone Canyon. That project required in excess of 300,000 man hours during this unique and successful project.

Based on a most recent three year history, your basic drydock and maintenance and repair package, the average manning required is approximately 450-500 men per day. Longer yard periods with lower man day levels could be better for special projects.

THOMPSON PASS

Arrive August 17, 1989
To Dock August 21, 1989
Off Dock August 27, 1989
Depart September 19, 1989
August 17th to September 19th
Bailey and Tank Coating
34 Days -- 7 Day Drydock

BROOKS RANGE

Arrive April 14, 1990
To Dock April 14, 1990
Off Dock April 18, 1990
Depart April 18, 1990
April 14th to 18th
4 Days -- 4 Days Drydock

BROOKS RANGE

Arrive May 27, 1990
To Dock May 29, 1990
Off Dock June 9, 1990
Depart June 25, 1990
May 27th to June 25th
Bailey and Tank Coating
30 Days -- 7 Day Drydock

KEYSTONE CANYON

Arrive August 4, 1990
To Dock August 31, 1990
Off Dock October 3, 1990
Depart October 24, 1990

(165,000 dwt class work listing continues)

EXXON BENICIA
Arrive March 8, 1991
To Dock March 31, 1991
Off Dock April 8, 1991
Depart April 21, 1991
March 8th to April 21st
Integrated Bridge and Tank Coating
45 Days -- 9 Day Drydock

9. Based only on the above delineated projects, we believe your drydock period should approximate 7 calendar days. The yard period should approximate 25 calendar days. Northwest Marine has installed Bailey Net-90 Systems on both the THOMPSON PASS and BROOKS RANGE. We were involved as well on the integrated bridge system on EXXON BENICIA and her cargo hose handling cranes. Northwest Marine has removed various plates found fractured in 165,000 dwt class tankers by testing physical and chemical properties for owners.

10. Attachment No. 2 outlines our current safety organization. This organization is buttressed and reinforced by all levels of executive management of the company. Southwest Marine's commitment to safety has dramatically reduced lost time accidents for Northwest Marine. We have our own safety and medical department who has a perpetual mission of eliminating all unnecessary accidents and unsafe acts which lead to those accidents.

The Divisional Safety Manager at Northwest Marine will be your primary contact in this project. He has overall responsibility for coordinating, formatting, developing and enforcing all our safety policies and procedures. He is supported by the deck plate level competent persons. They are responsible for enforcement of all established safety rules and regulations. They oversee the daily updates of all gas free certificates, after the initial certification by a marine chemist.

Our company is actively involved with Federal, State and local authorities concerning environmental issues. We have taken the lead in addressing these issues with the Port of Portland and the State of Oregon. Our extensive experience in our California facilities has given us a head start in the Oregon facility. We accomplish the following on a regularly scheduled basis:

- a) Every Thursday of each work week all production crafts are required to conduct safety gang box meetings. This is done on company time and the time allotted is dedicated to safety issues only.
- b) Every third Wednesday of each month, Northwest Marine holds formal safety meetings to which all craft union Business Agents have an open invitation. Mandatory attendance is required of all craft union shop stewards along with the Divisional Production Manager and Divisional Safety Manager.
- c) On a monthly basis, Northwest Marine takes part in an overall Port of Portland Safety Meeting. Here all contractors currently leasing property inside the shipyard attend to discuss safety matters that affect everyone. Included on the list of attendees is the Port Harbor Master, OSHA Area Representatives, Portland Fire Bureau Representatives and Representatives for the Port of Portland Management.

(Continues on next page)

- d) Upon arrival of each vessel, Northwest Marine conducts a safety meeting with the vessels safety officer and ship's Captain to discuss yard procedures and exchange Material Safety Data Sheets on any and all potentially hazardous materials either on board or scheduled to be used during the repair period.
- e) A complete description of Northwest Marine's Drug and Alcohol Policies and Procedures were provided to Mr. David Walker of MPT consulting, Inc. in November of 1991. Please refer to his report for details.
- f) Our company strongly encourages Exxon Shipping to include a requirement for all personnel working on all Exxon Shipping projects to be subject to random drug testing. We will discuss this with you in more detail in an appropriate setting.

11. Our company has made a commitment to Total Quality Management practices. Over the last six months, this commitment has intensified through the introduction of twelve training modules which are being given to all personnel in all divisions of our company. These training sessions will evolve our company's quality assurance practices to the highest attainable level.

We have been a leader historically in the standard government and commercial quality assurance programs which ensure both our company and yours that the work is being done correctly the first time it is done. Our Total Quality Management commitment however, is designed to go far beyond physical quality of work in the work place. While these practices help update our in process inspections and improve our feedback loops, they are really intended to raise the level of commitment of the whole person to the job. While we improve our approach through this educational process, we still have in place the classical quality assurance programs.

Toward that end boilermakers and pipefitters maintain active files of all welder certifications and weld procedures required by Regulatory Bodies for this class vessel.

All divisions have active programs of Total Quality Management. This includes formal classroom instruction on various topics ranging from employee motivation, elements of supervision, leadership, safety, quality and productivity.

Northwest Marine prides itself on being an industry leader utilizing project management techniques to manage and control all of our vessel repair periods.

We have developed, through years of experience, a scheduling and progressing system that provides both the customer and the shipyard current up to date project information. This information is then used jointly, to assist in project evaluation, analysis of effects of change orders on re-delivery dates, progress payments and dispute avoidance.

We demonstrated the effectiveness of our Project Management System for Exxon Shipping personnel during the 1991 yard period of the EXXON BENICIA. Very stringent scheduling and progressing methods were employed to facilitate on time delivery within your planned budget. We submitted the total final invoice on the same day the ship sailed.

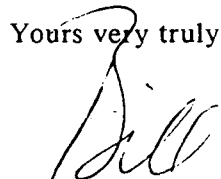
We anticipate a review of your maintenance records will show that the repairs and installations were effected with no warranty work being required subsequent to the yard period. This not only reduced warranty expense to our company, but also helped minimize your cost of unplanned down time.

Page 6 to Mike English
December 27, 1991

12. Northwest Marine will be 49 years old by the time the EXXON NORTH SLOPE project commences. The company has a proud heritage of returning vessels to service as agreed both from a time perspective and as to the quality of the work. Our company is now a part of a 4,000 person four facility shipyard network. Our ability to meet the vessel's needs and those of its operator around the world has never been greater. In addition to being able to bring the resources from our California divisions into play in Portland, we have the ability to service you in any one of the four West Coast cities we serve. We also have traveling squads of qualified shipyard journeymen who are ready to move at a moment's notice with their tools and equipment to serve your needs even while your vessel is underway generating revenue.

In this declining market for ship repair work, our company is committed to serving a few customers very well. The only opportunity we have to do more work for Exxon Shipping, the premier Jones Act tanker fleet operator, is to do you a great job, one project at a time. Our entire organization is dedicated to doing just that for you. Our high level of quality is driven by a need to show you on each undertaking our high level of dedication to a quality project for your company. We have all the systems and mechanisms in place to make these things happen. Most importantly, however, we have the motivation.

Yours very truly,



William H. Zavín, II
Senior Vice President
Commercial Contracting Activities

NWMAR130906

ATTACHMENT #1

VOLUME: (Input section)

Yards: NWM

| Job # | Vessel Name | Est Rec. | Avg Rate | Start Date | End Date | Jan 92 | Feb 92 | Mar 92 | Apr 92 | May 92 | Jun 92 | Jul 92 | Aug 92 | Sept 92 | Oct 92 | Nov 92 | Dec 92 | TOTAL 92 |
|-------|-------------|----------|----------|------------|----------|--------|--------|--------|--------|--------|--------|--------|--------|---------|--------|--------|--------|----------|
|-------|-------------|----------|----------|------------|----------|--------|--------|--------|--------|--------|--------|--------|--------|---------|--------|--------|--------|----------|

1992 POSSIBLES

Cost+ Gov

Subtotal - Cost+ Gov

Fixed Gov

Subtotal - Fixed Gov

Commercial

| | | | | | | | | | | | | | | | | | | |
|-----------------------|--------|--------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|---|-----|
| MALASPINA | Nov-92 | Nov-92 | | | | | | | | | | | | | | 20 | | 20 |
| COLUMBIA | May-92 | Dec-92 | | | | | | 20 | | 20 | | 20 | | 20 | | 20 | | 160 |
| INDEPENDENCE | Jan-92 | Jan-92 | 40 | | | | | | | | | | | | | | | 40 |
| CONSTITUTION | Aug-92 | Sep-92 | | | | | | | | | | | 20 | 20 | | | | 40 |
| SKY PRINCESS | Sep-92 | Oct-92 | | | | | | | | | | | | 7 | 10 | | | 17 |
| ISLAND PRINCESS | Sep-92 | Oct-92 | | | | | | | | | | | 14 | 14 | | | | 27 |
| BROOKS RANGE | Jul-92 | Jul-92 | | | | | | | | | | 53 | | | | | | 53 |
| BT SAN DIEGO | Mar-92 | Apr-92 | | | 20 | | 20 | | | | | | | | | | | 40 |
| LION OF CALIFORNIA | May-92 | May-92 | | | | | | | 20 | | | | | | | | | 20 |
| SIERRA MADRE | Aug-92 | Aug-92 | | | | | | | | | | | 5 | | | | | 5 |
| SANSENINA II | Aug-92 | Aug-92 | | | | | | | | | | | 5 | | | | | 5 |
| COAST RANGE | Jun-92 | Jun-92 | | | | | | | | | 5 | | | | | | | 5 |
| ARCO ANCHORAGE | May-92 | Jun-92 | | | | | | | 20 | | 20 | | | | | | | 40 |
| ARCO SAG RIVER | Aug-92 | Sep-92 | | | | | | | | | | | 20 | 20 | | | | 40 |
| EXION N. SLOPE | Apr-92 | May-92 | | | | | 40 | | 30 | | | | | | | | | 70 |
| MISC TANKER | Jan-92 | Dec-92 | | | 30 | 20 | 10 | | | 20 | | | | | | | | 80 |
| SHOP/MISC | Jan-92 | Dec-92 | 4 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 37 |
| Subtotal - Commercial | | | 44 | 33 | 43 | 73 | 93 | 68 | 76 | 74 | 84 | 47 | 43 | 23 | | | | 700 |
| Total 1992 Possibles | | | 44 | 33 | 43 | 73 | 93 | 68 | 76 | 74 | 84 | 47 | 43 | 23 | | | | 700 |

ATTACHMENT #1

VOLUME: (input section)

Yard: NWM

| Job # | Vessel Name | Est Avg Rec. Rate | Start Date | End Date | Jan 92 | Feb 92 | Mar 92 | Apr 92 | May 92 | Jun 92 | Jul 92 | Aug 92 | Sept 92 | Oct 92 | Nov 92 | Dec 92 | TOTAL 92 |
|-------|-------------|-------------------|------------|----------|--------|--------|--------|--------|--------|--------|--------|--------|---------|--------|--------|--------|----------|
|-------|-------------|-------------------|------------|----------|--------|--------|--------|--------|--------|--------|--------|--------|---------|--------|--------|--------|----------|

1992 POSSIBLES

Cost+ Gov

Subtotal - Cost+ Gov

Fixed Gov

Subtotal - Fixed Gov

Commercial

| | | | | | | | | | | | | | | | | | |
|-----------------------|--------|--------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|
| MALASPINA | Nov-92 | Nov-92 | | | | | | | | | | | | | | | 20 |
| COLUMBIA | May-92 | Dec-92 | | | | | | | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 160 |
| INDEPENDENCE | Jan-92 | Jan-92 | 40 | | | | | | | | | | | | | | 40 |
| CONSTITUTION | Aug-92 | Sep-92 | | | | | | | | | | 20 | 20 | | | | 40 |
| SKY PRINCESS | Sep-92 | Oct-92 | | | | | | | | | | | 7 | 10 | | | 17 |
| ISLAND PRINCESS | Sep-92 | Oct-92 | | | | | | | | | | | 14 | 14 | | | 27 |
| BROOKS RANGE | Jul-92 | Jul-92 | | | | | | | | | 53 | | | | | | 53 |
| BT SAN DIEGO | Mar-92 | Apr-92 | | | | 20 | 20 | | | | | | | | | | 40 |
| LION OF CALIFORNIA | May-92 | May-92 | | | | | | 20 | | | | | | | | | 20 |
| SIERRA MADRE | Aug-92 | Aug-92 | | | | | | | | | | 5 | | | | | 5 |
| SANSENINA II | Aug-92 | Aug-92 | | | | | | | | | | 5 | | | | | 5 |
| COAST RANGE | Jun-92 | Jun-92 | | | | | | | | | 5 | | | | | | 5 |
| ARCO ANCHORAGE | May-92 | Jun-92 | | | | | | 20 | 20 | | | | | | | | 40 |
| ARCO SAG RIVER | Aug-92 | Sep-92 | | | | | | | | | | 20 | 20 | | | | 40 |
| EXION N.SLOPE | Apr-92 | May-92 | | | | | 40 | 30 | | | | | | | | | 70 |
| MISC TANKER | Jan-92 | Dec-92 | | | | 30 | 20 | 10 | | 20 | | | | | | | 80 |
| SHOP/MISC | Jan-92 | Dec-92 | 4 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 37 |
| Subtotal - Commercial | | | 44 | 33 | 43 | 73 | 93 | 68 | 76 | 74 | 84 | 47 | 43 | 23 | | | 700 |
| Total 1992 Possibles | | | 44 | 33 | 43 | 73 | 93 | 68 | 76 | 74 | 84 | 47 | 43 | 23 | | | 700 |

12-13-91

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of pages > 4

EXXON SHIPPING COMPANY

POST OFFICE BOX 1512 • HOUSTON, TEXAS 77251-1512 "EXXSHIP HOUSTON"

M. T. ENGLISH
REPAIR COORDINATION HEAD

| | |
|--------------------------------------|------------------------------|
| To <i>Mr. William M. Johnston</i> | From <i>M. T. English</i> |
| Co. | Co. |
| Dept. | Phone # |
| Fax # | Fax # |

December 13, 1991

**EXXON NORTH SLOPE
1992 Shipyard Screening**

Mr. William M. Johnston
NORTHWEST MARINE, INC.
5555 N. Channel Avenue
Portland, Oregon 97217

Gentlemen:

Exxon Shipping Company (Exxon) is currently planning the biennial shipyard maintenance/repair program for its 165,000 DWT class crude oil tanker, the EXXON NORTH SLOPE. Exxon is contacting a multi-national group of shipyards to determine their (a) interest in bidding for this work, and (b) capabilities to perform it, prior to selecting the bidders to be invited to submit proposals. The EXXON NORTH SLOPE and the program of work to be accomplished are generally described below. In addition, we have attached some questions designed to determine your interest in this work and capabilities to perform it. We request your answers if you are interested. In that regard, upon receipt of this letter and your initial review, please acknowledge receipt by return facsimile to me at (713) 656-2184, also indicating your plans to reply or decline interest in being considered for selection to bid for this work.


The EXXON NORTH SLOPE is a crude oil tanker of 173,380 DWT (75,272 gross registered tons), 906' length overall and 173' beam. The NORTH SLOPE began service as a crude oil tanker in 1979. Biennial shipyard drydocking has been routinely performed since that time, with the last drydocking having been completed in May 1990. The 1992 shipyard drydock maintenance/repair program is comprised of standard drydock maintenance typically conducted on this class of tanker by Exxon. Included in the work will be the normal complement of mechanical/electrical equipment removals, shop inspection, maintenance/repair and reinstallation; steel repair/renewals; full hull blasting and recoating; selected cargo/ballast tank blasting and recoating; house and main deck "touch-up" coating; ABS Special Hull Survey No. 3; USCG biennial inspection; structural modifications; and other general repairs, modifications (i.e., betterments) and regulatory inspections/surveys. Mr. Robert G. (Bob) Tompkins will be Exxon's Repair Superintendent who will manage all aspects of the NORTH SLOPE maintenance/repair program with the selected shipyard.

Exxon's current schedule for conducting the contracting and initiating shipyard activities is:

- | | |
|--------------------|-------------------------------|
| • Select Bidders | January 1992 |
| • Invite Proposals | Late January - Early February |
| • Proposals Due | March |
| • Contract Award | April |
| • Start Shipyard | Late April - Early May 1992 |

CC: Nugent

4245



NWMAR130909

-2-

| | | | |
|-------|-------------------------|---------|---------------|
| To | Mr. William M. Johnston | From | M. T. English |
| Co. | | Co. | |
| Dept. | | Phone # | |

Some elements or all of the foregoing contract development program could slip by as much as 1-2 months depending upon Exxon's plans for addressing various current repair related issues affecting the EXXON NORTH SLOPE (e.g., definition of steel modifications to mitigate side shell cracking). Exxon will keep shipyards who respond positively to this screen letter apprised of any contracting schedule changes as they arise.

Based upon an Exxon prepared specification that will identify shipyard work items, materials of construction and work performance specifics, selected bidders will be invited to submit firm fixed price proposals to perform the work. Exxon plans to release the Invitation for Proposals not later than early February 1992 and allow six (6) weeks for selected shipyards to prepare their proposals. A limited slate of bidders will be selected from among the interested respondents to this screening letter. Contract award is planned for April 1992 with shipyard activities to commence within a month or so thereafter.

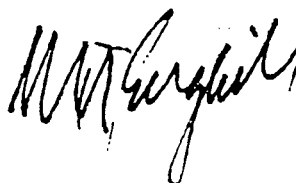
In order to determine your interest in bidding for work on the EXXON NORTH SLOPE and to evaluate your capability to accomplish the intended work, questions are presented in Attachment 1 that we request all interested shipyards answer and return to Exxon. Please direct your replies to my attention at Exxon Shipping Company, 800 Bell Street, Room 3407, Houston, Texas 77002. We request you submit your completed answers on or before the close of business on Thursday, January 2, 1992. After evaluating the responses to this screening, Exxon may contact you to clarify/confirm information in your reply or to schedule a visit to meet with you and go into further detail regarding various aspects of your response. If visits are to be conducted, they will most likely be scheduled during the weeks of January 6 and 13, 1992.

Although this screening letter and the attached questions pertain to the EXXON NORTH SLOPE only, for your additional information later in 1992 Exxon will seek to secure shipyard interest and drydock space for three additional of its ocean tankers that trade on the U.S. West Coast. Biennial drydock periods are now scheduled for the EXXON GALVESTON, JAMESTOWN and SAN FRANCISCO in the September-October 1992 time frame. Information obtained as a result of this screening exercise may give us useful insight to begin the planning for these near future ship maintenance/repair activities.

Exxon considers aspects of its business plans disclosed in this letter to be confidential and requests that you limit dissemination of information related to this screening letter to those personnel in your organization who have a need-to-know in order to reply to this letter.

Please contact me at (713) 656-2835 or by facsimile on (713) 656-2184 if you have any questions related to this screening letter. In the meantime, we will look forward to receiving your reply prior to January 2, 1992.

Sincerely,



MTE:lrc
Attachment
49662/49670

TOTAL P.01

NWMAR130910

Attachment 1 Screening Questions

Please number your reply to the following questions with the same number as the question.

1. State your willingness to submit a competitive firm fixed price proposal for the shipyard maintenance/repair work on the EXXON NORTH SLOPE. If your reply is negative, please indicate the reason(s) and any suggested compensating actions you believe Exxon can take to overcome your concerns that have led you to respond negatively. Note that a negative reply to this Exxon screening letter will not preclude your company from being screened for interest in future Exxon shipyard work. *Here the line is not to let a spec project E&T Dept*
2. Confirm your ability to prepare a proposal in six (6) weeks during the proposal preparation time frame contemplated by Exxon. *6 wks*
3. Identify the primary shipyard drydock you would propose for the NORTH SLOPE and the alternate should that facility not be available when required. Briefly describe the availability, location, physical features, cranes and crane capabilities, etc. of these facilities. *DD #4*
4. Briefly discuss the current workload and the workload forecast for April-May-June 1992 at the shipyard where you would conduct work on the NORTH SLOPE. Identify the major ship maintenance/repair work already booked and the expected new work you believe you have a good chance of capturing which is likely to be performed in this same time frame. *100% with 100% C.I. 5/1/92*
5. Characterize the present shipyard bid and proposal activity level (e.g., high, normal or low activity). Provide your assessment of what you expect the bid and proposal activity level to be during the first half of 1992. *Normal and that from 1/1/92*
6. Provide construction craft manpower totals (current actuals and forecast) for the shipyard where you would propose to perform the work for the EXXON NORTH SLOPE if selected to bid. Provide the following detail: *100% in place from 1/1/92*

| Discipline | Time Frame: | | Current | | March 1992 | | June 1992 | |
|-------------------------|-------------|--|---------|-----|------------|-----|-----------|-----|
| | Personnel: | | Own | Sub | Own | Sub | Own | Sub |
| Welders | | | — | — | — | — | — | — |
| Pipefitters | | | — | — | — | — | — | — |
| Machinists | | | — | — | — | — | — | — |
| Boiler Makers | | | — | — | — | — | — | — |
| Elect. Installers | | | — | — | — | — | — | — |
| Blasters | | | — | — | — | — | — | — |
| Coaters | | | — | — | — | — | — | — |
| Other | | | — | — | — | — | — | — |
| | | | | | | | | |
| | | | | | | | | |
| YARD TOTALS (Own + Sub) | | | — | | — | | — | |

-2-

7. What ship maintenance/repair work do you normally subcontract versus perform with your own forces? Identify activities for which your shipyard has long standing/long term relationships with certain subcontractors, the nature of the work they perform and the name of the subcontractor company(s).
8. Briefly describe your specific experience constructing and/or maintaining/repairing crude oil tankers of the 165 DWT class, in particular either the EXXON BENICIA or NORTH SLOPE and their Avondale sister ships. Provide the dates and general nature of the work you have performed on them.
9. From the information we have provided and your familiarity with the NORTH SLOPE class of crude oil tanker, what is your preliminary estimate in calendar days of the time you would require to perform the NORTH SLOPE work considering other forecast shipyard workload, manpower availability/constraints, etc., and anything else that you are aware of that affects timely work performance.
10. Describe briefly your current safety organization and approaches to ship maintenance/repair work that your company routinely applies to insure ship repair work is performed on an injury-free, damage-free basis [e.g., independent Safety Advisor assigned to each ship, published safety manual, drug and alcohol free workplace program(s), regular safety meetings, ongoing/active safety incentive programs]. What is your current workers' compensation insurance experience modifier (where applicable)?
11. In a manner similar to your answer to Question 10 above, briefly describe your quality assurance/control organization and the approaches that you apply to assure high quality work is produced the first time.
12. Provide any additional information about your shipyard that you believe will help Exxon to understand your organization, personnel, facilities and the manner in which you apply them to insure the ship repair work you perform is accomplished safely, meets owner's quality standards and is delivered on time.

*Peter, Japan
Flyin 59000*

* * * *

*N Process
inspections*

*TD 14
Quality Mtr
modules*

*Mr. Dean
Pamphylus
Test
if in
SUNNATA
we will
indict
Nelson*

For your guidance in responding to this screening letter, Exxon is looking for brief, to the point replies to the twelve questions asked. Your reply should be easily assembled in the time we have allowed for response preparation.

MTE:lc
12/10/91
29602

TOTAL P.03

NWMAR130912

12/13/1991 13:34 FROM EXXON SHIP AND CO HOUSTON TO NW

EXXON SHIPPING COMPANY

POST OFFICE BOX 1512 • HOUSTON, TEXAS 77251-1512 "EXXSHIP HOUSTON"

M.T. ENGLISH
REPAIR COORDINATION HEAD

12-15-91

Post-It™ brand fax transmittal memo 7671 # of pages > 4

| | |
|--------------------------------------|------------------------------|
| To <i>Mr. William M. Johnston</i> | From <i>M. T. English</i> |
| Co. | Co. |
| Dept. | Phone # |
| Fax # | Fax # |

December 13, 1991

EXXON NORTH SLOPE
1992 Shipyard Screening

Mr. William M. Johnston
NORTHWEST MARINE, INC.
5555 N. Channel Avenue
Portland, Oregon 97217

Gentlemen:


Exxon Shipping Company (Exxon) is currently planning the biennial shipyard maintenance/repair program for its 165,000 DWT class crude oil tanker, the EXXON NORTH SLOPE. Exxon is contacting a multi-national group of shipyards to determine their (a) interest in bidding for this work, and (b) capabilities to perform it, prior to selecting the bidders to be invited to submit proposals. The EXXON NORTH SLOPE and the program of work to be accomplished are generally described below. In addition, we have attached some questions designed to determine your interest in this work and capabilities to perform it. We request your answers if you are interested. In that regard, upon receipt of this letter and your initial review, please acknowledge receipt by return facsimile to me at (713) 656-2184, also indicating your plans to reply or decline interest in being considered for selection to bid for this work.

The EXXON NORTH SLOPE is a crude oil tanker of 173,380 DWT (75,272 gross registered tons), 906' length overall and 173' beam. The NORTH SLOPE began service as a crude oil tanker in 1979. Biennial shipyard drydocking has been routinely performed since that time, with the last drydocking having been completed in May 1990. The 1992 shipyard drydock maintenance/repair program is comprised of standard drydock maintenance typically conducted on this class of tanker by Exxon. Included in the work will be the normal complement of mechanical/electrical equipment removals, shop inspection, maintenance/repair and reinstallation; steel repair/renewals; full hull blasting and recoating; selected cargo/ballast tank blasting and recoating; house and main deck "touch-up" coating; ABS Special Hull Survey No. 3; USCG biennial inspection; structural modifications; and other general repairs, modifications (i.e., betterments) and regulatory inspections/surveys. Mr. Robert G. (Bob) Tompkins will be Exxon's Repair Superintendent who will manage all aspects of the NORTH SLOPE maintenance/repair program with the selected shipyard.

Exxon's current schedule for conducting the contracting and initiating shipyard activities is:

- | | |
|--------------------|-------------------------------|
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| • Invite Proposals | Late January - Early February |
| • Proposals Due | March |
| • Contract Award | April |
| • Start Shipyard | Late April - Early May 1992 |

11245



NWMAR130913

Post-It™ brand fax transmittal memo 7671 # of pages 4

| | | | |
|-------|----------------------|---------|---------------|
| To | Mr. William Johnston | From | M. T. English |
| Co. | | Co. | |
| Dept. | | Phone # | |

-2-

Some elements or all of the foregoing contract development program could slip by as much as 1-2 months depending upon Exxon's plans for addressing various current repair related issues affecting the EXXON NORTH SLOPE (e.g., definition of steel modifications to mitigate side shell cracking). Exxon will keep shipyards who respond positively to this screen letter apprised of any contracting schedule changes as they arise.

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Exxon considers aspects of its business plans disclosed in this letter to be confidential and requests that you limit dissemination of information related to this screening letter to those personnel in your organization who have a need-to-know in order to reply to this letter.

Please contact me at (713) 656-2835 or by facsimile on (713) 656-2184 if you have any questions related to this screening letter. In the meantime, we will look forward to receiving your reply prior to January 2, 1992.

Sincerely,



MTE:lc
Attachment

49662/49678

TOTAL P.01

NWMAR130914

Attachment 1
Screening Questions

Please number your reply to the following questions with the same number as the question.

1. State your willingness to submit a competitive firm fixed price proposal for the shipyard maintenance/repair work on the EXXON NORTH SLOPE. If your reply is negative, please indicate the reason(s) and any suggested compensating actions you believe Exxon can take to overcome your concerns that have led you to respond negatively. Note that a negative reply to this Exxon screening letter will not preclude your company from being screened for interest in future Exxon shipyard work.
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3. Identify the primary shipyard drydock you would propose for the NORTH SLOPE and the alternate should that facility not be available when required. Briefly describe the availability, location, physical features, cranes and crane capabilities, etc. of these facilities.
4. Briefly discuss the current workload and the workload forecast for April-May-June 1992 at the shipyard where you would conduct work on the NORTH SLOPE. Identify the major ship maintenance/repair work already booked and the expected new work you believe you have a good chance of capturing which is likely to be performed in this same time frame.
5. Characterize the present shipyard bid and proposal activity level (e.g., high, normal or low activity). Provide your assessment of what you expect the bid and proposal activity level to be during the first half of 1992.
6. Provide construction craft manpower totals (current actuals and forecast) for the shipyard where you would propose to perform the work for the EXXON NORTH SLOPE if selected to bid. Provide the following detail:

| Discipline | Time Frame: | Current | | March 1992 | | June 1992 | |
|-------------------------|-------------|---------|-----|------------|-----|-----------|-----|
| | Personnel: | Own | Sub | Own | Sub | Own | Sub |
| Welders | | | | | | | |
| Pipefitters | | | | | | | |
| Machinists | | | | | | | |
| Boiler Makers | | | | | | | |
| Elect. Installers | | | | | | | |
| Blasters | | | | | | | |
| Coaters | | | | | | | |
| Other | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| YARD TOTALS (Own + Sub) | | | | | | | |

TO: BUREAU
BLR.
WTR.
FROM: EXXON
ALL COVERED

-2-

7. What ship maintenance/repair work do you normally subcontract versus perform with your own forces? Identify activities for which your shipyard has long standing/long term relationships with certain subcontractors, the nature of the work they perform and the name of the subcontractor company(s).
8. Briefly describe your specific experience constructing and/or maintaining/repairing crude oil tankers of the 165 DWT class, in particular either the EXXON BENICIA or NORTH SLOPE and their Avondale sister ships. Provide the dates and general nature of the work you have performed on them.
9. From the information we have provided and your familiarity with the NORTH SLOPE class of crude oil tanker, what is your preliminary estimate in calendar days of the time you would require to perform the NORTH SLOPE work considering other forecast shipyard workload, manpower availability/constraints, etc., and anything else that you are aware of that affects timely work performance.
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12. Provide any additional information about your shipyard that you believe will help Exxon to understand your organization, personnel, facilities and the manner in which you apply them to insure the ship repair work you perform is accomplished safely, meets owner's quality standards and is delivered on time.

* * * *

For your guidance in responding to this screening letter, Exxon is looking for brief, to the point replies to the twelve questions asked. Your reply should be easily assembled in the time we have allowed for response preparation.

MTE:lc
12/10/91
29692

TOTAL P.03

NWMAR130916

-2-

7. What ship maintenance/repair work do you normally subcontract versus perform with your own forces? Identify activities for which your shipyard has long standing/long term relationships with certain subcontractors, the nature of the work they perform and the name of the subcontractor company(s).
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* * * *

For your guidance in responding to this screening letter, Exxon is looking for brief, to the point replies to the twelve questions asked. Your reply should be easily assembled in the time we have allowed for response preparation.

MTE:lc
12/10/91
29692

TOTAL P.03

NWMAR130917

EXXON SHIPPING

BN

(North Slope) 19 DEC 91

7 - During ship repair contracts on 165 Tankers
NORMAL SHIPYARD SUBCONTRACTORS ARE

- Port of Potham, Tugs, Pilots
- Marine Chemist

- NDT, gauging SERVICES

NOTE NWM PERFORMS SOME MAG. PART. TESTING

- BASED ON WORK LOAD SOME INSIDE MACHINING SERVICES

ie. VALVE MACHINING, SHAFT MACHINING, BUSHING MACHINING

- SETTING & CERTIFICATION OF Boiler safety VALVES

- TANK BLASTING AND COATING

- PROPELLER REPAIRS

- ICS, Boiler Automation SURVEY & TESTING

- CATHODIC PROTECTION EQUIPT SURVEY & TESTING

STERN ~~STERN~~ Shaft SEALS & SERVICE WORK

- Bore scope inspections

- Fan Balancing, Rotating element Balancing

- Elec. Motor Repairs

- Boiler work

NOTE: WATER WASH, OPEN, INSPECT AND HYDROS ARE
USUALLY PERFORMED BY NWM

- Winch Brake, ~~Winch Brake~~ Lining Renewal
Band

- Re-SWEDGE MOORING WIRE EYES

- RADAR, NAVIGATION, ELECTRONICS WORK

NWM (ALSO NORMALLY
~~WAS~~ ASSISTED OWNER SUPPLIED TECH
REPS AS SPECIFIC

NWM HAS ALSO INSTALLED Bailey Net-90 system
on Both Thompson Pass and Brooks Range
as well as integrated Bridge system on
Exxon Benicia and Cargill ~~Star~~ have handling, charges

NWM HAS REMOVED VARIOUS PL'S FOUND FASCULOUS
IN 165'S FOR TESTING PHYSICAL AND CHEMICAL PROPERTIES
FOR OWNERS

304 19DEC9

① Thompson Pass 4708 ~~4739~~

D/O Period - MFR - Raily - Tank Carrying
George Roubert - TREF JDS

② Brooks Range 4239 ~~4249~~
Emergency D/O require - 2000 hrs

③ Brooks Range 4724 ~~4750~~ 70
D/O require 5400 hrs
MFR - Raily - Tank Carrying

④ Keystone Canyon 4729 ~~4750~~ 70
Capacity Requirement 305,000 hrs
MFR

⑤ Belvidere 4740
BIRMINGHAM D/O and overhaul

Average D/O period is 5-7 days
Average Year period is 22-28 days

⑥ - Basis on Above listed 3 year history
Basic D/O and MFR packages average

Manning Requirement is approx 450-500 ^{and low}
Man per Day. ^{longer} Year periods, ^{mostly} 1 day

Resources for Special projects as
Met ^{in Met 90} installation, Tank
Costing projects etc.

← 24 days →

Thompson Pass

ARRIVE
TO DOCK
OFF DOCK
DEPART

4708
17 AUG 89
21 AUG 89
27 AUG 89
19 SEP 89

17 AUG - 19 SEP 89
~~17 AUG - 19 SEP 89~~
(NOTE Bailey & TANK COATING)
34 DAYS

7 DAY D/O

AVERAGE 150 MEN/DAY

TOTAL HRS 40,000

Brooks Range

ARRIVE
TO DOCK
OFF DOCK
DEPART

4239
14 Apr 90
14 Apr 90
18 Apr 90
18 Apr 90

14-18 Apr 90

4 DAYS
4 DAY D/O

TOTAL HRS 2,000

63 MEN/DAY

Brooks Range

ARRIVE
TO DOCK
OFF DOCK
DEPART

4724
27 May 90
29 May 90
9 Jun 90
25 JUNE 90

27 May - ²⁵ JUN 90
(NOTE Bailey & TANK COATING)
30 DAYS

7 DAY D/O

TOTAL HRS - ~~52,000~~ 52,000

216 men/day

KEYSTON Canyon

ARRIVE
TO DOCK
OFF DOCK
DEPART

4729
4 Aug 90
31 Aug 90
30 Oct 90
24 OCT 90

4 Aug - 24 Oct 90

~~4 DAYS~~

465 MEN/DAY

TOTAL HRS 305,000

BENICIA

ARRIVE
TO DOCK
OFF DOCK
DEPART
HRS

4740
8 Mar 91
~~8 Mar 91~~ 31 Mar
~~21~~ 8 Apr
21 Apr 91
149,000

8 Mar - 21 Apr 91
(NOTE Integrated Bailey & TANK COATING)
45 DAYS
9 DAY D/O
390 men/day

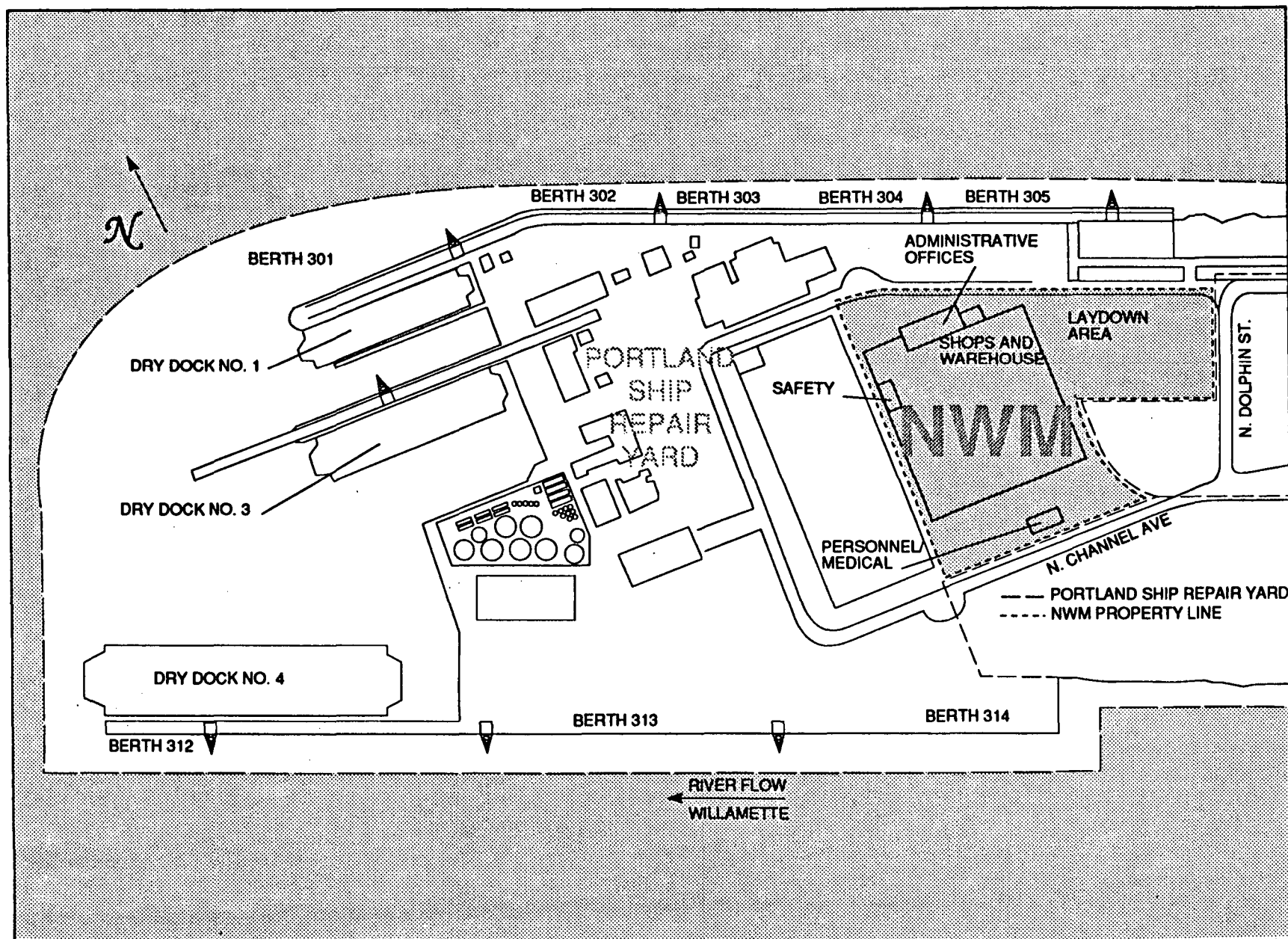


Exhibit 3.1-1
Portland Division (NWM)

SOUTHWEST MARINE, INC.

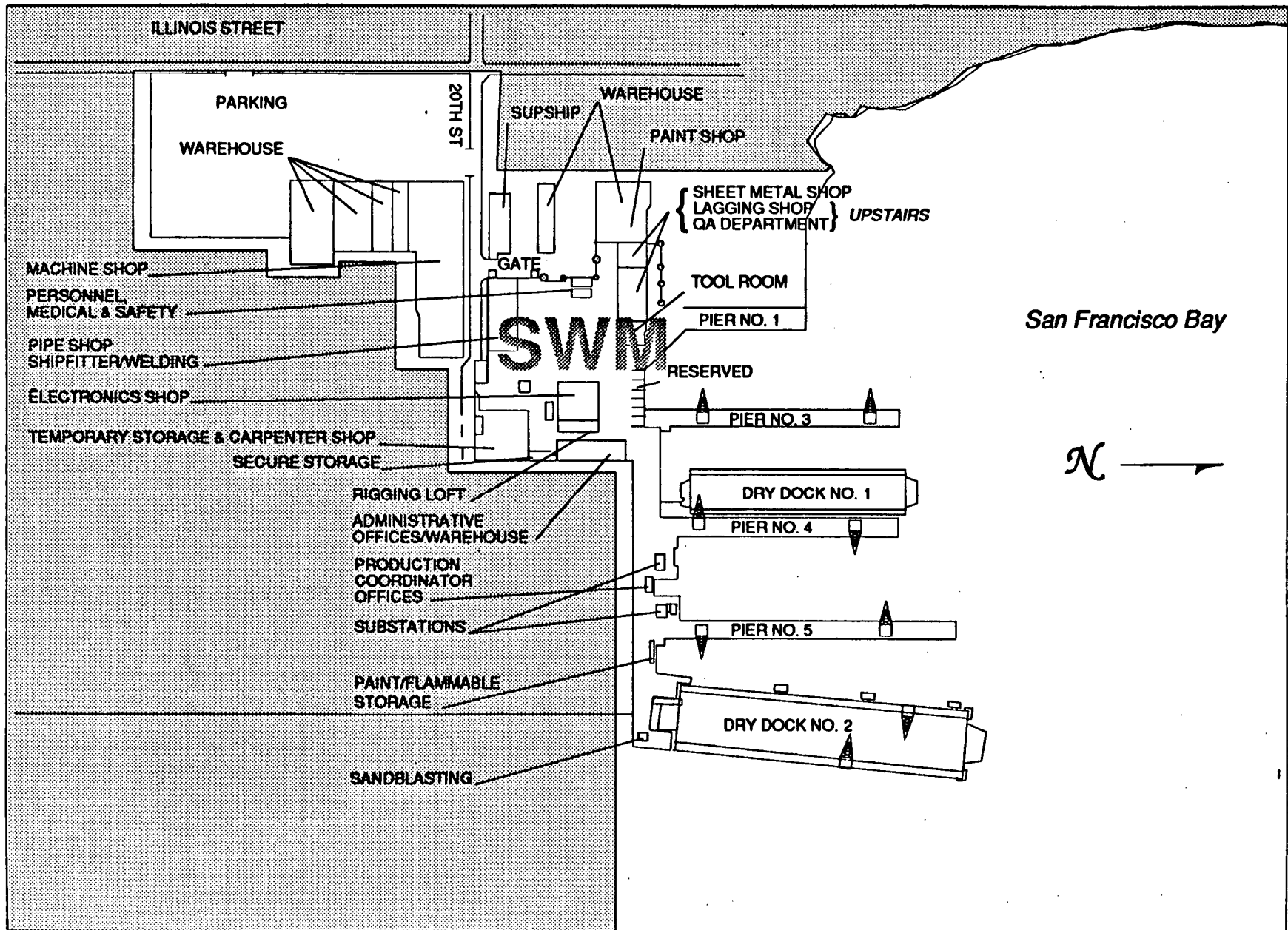


Exhibit 3.2-1
San Francisco Division

SOUTHWEST MARINE, INC.

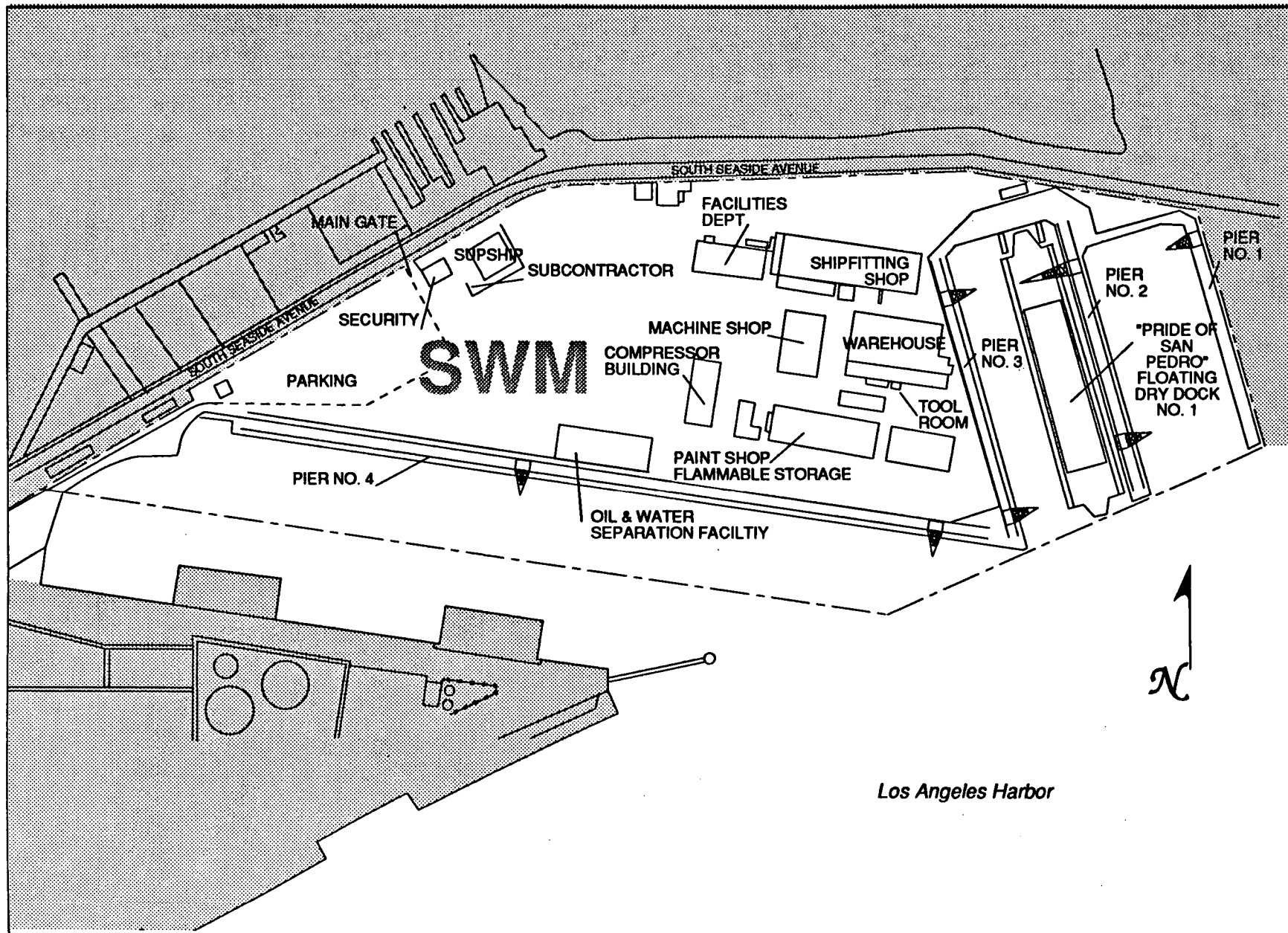


Exhibit 3.3-1
San Pedro Division

SOUTHWEST MARINE, INC.

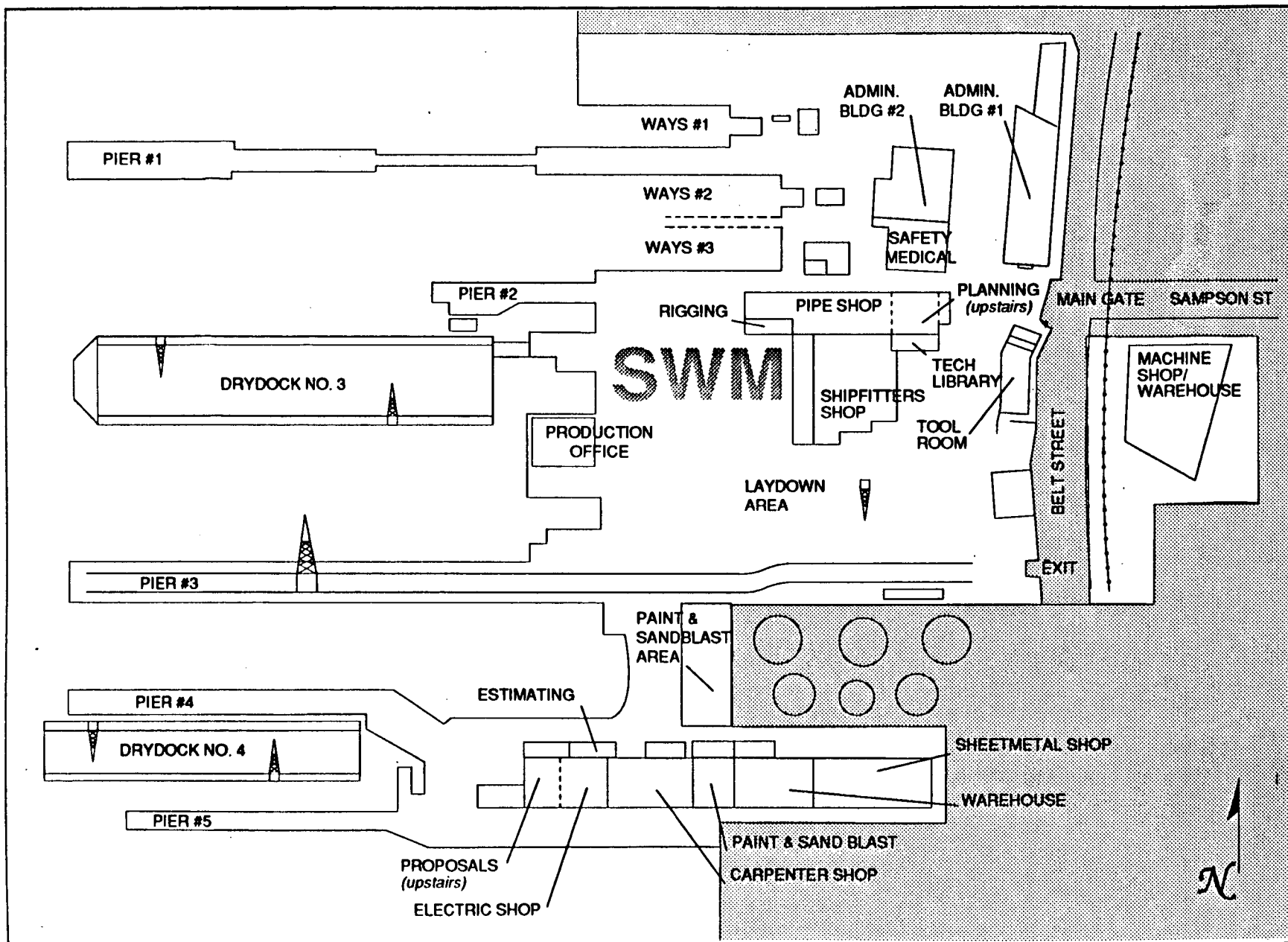


Exhibit 3.4-1
San Diego Division

SOUTHWEST MARINE, INC.

MEMORANDUM**DATE:** August 8, 1991**TO:** Bill Zavin**FROM:** Bill Carroll**SUBJECT:** EXXON proposal

Bill,

As a result of our Aug. 6 conversation, I understand the following to be the key elements of the proposal you want developed:

1. Provide a full proposal listing qualifications of all divisions (although the first availability will probably be in Portland).
2. Propose a two-ship scenario, but address the probability of a single ship test period.
3. Do not go into great technical detail.
4. Thrust should be the positive aspects of a negotiated procurement. (Less growth, no surprises, less likelihood of litigious relationship, better repairs, etc.).
5. Project Manager (CAM) to be selected by the customer.
6. Propose a 6-mos advance planning period.
7. Initial contract price to be set based on a best-guess estimate taken from port engineer's list. Pricing to be negotiated as actual workscope is identified.
8. Present so as not to ruffle personnel currently tasked with EXXON advance planning.
9. Do not discuss any rate structure.

Preliminary data you will provide (if possible):

1. List of EXXON repair schedules for upcoming availabilities.
2. EXXON developed spec from previous availability

I am currently developing the outline and determining the need for and extent of any on-site (NWM) work by me. I will notify you of any arrangements, interviews, etc. I may need to complete the proposal. I am planning to complete the proposal for your submission to EXXON mid-September. If you have any problems with this schedule please let me know.

Thanks!



cc: Dick Camacho, Bill Johnston

MEMORANDUM

DATE: August 8, 1991

TO: Bill Zavin

FROM: Bill Carroll

SUBJECT: EXXON proposal

Bill,

As a result of our Aug. 6 conversation, I understand the following to be the key elements of the proposal you want developed:

1. Provide a full proposal listing qualifications of all divisions (although the first availability will probably be in Portland).
2. Propose a two-ship scenario, but address the probability of a single ship test period.
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Preliminary data you will provide (if possible):

1. List of EXXON repair schedules for upcoming availabilities.
2. EXXON developed spec from previous availability

I am currently developing the outline and determining the need for and extent of any on-site (NWM) work by me. I will notify you of any arrangements, interviews, etc. I may need to complete the proposal. I am planning to complete the proposal for your submission to EXXON mid-September. If you have any problems with this schedule please let me know.

Thanks!



cc: Dick Camacho, Bill Johnston

MEMORANDUM**Date:** August 2, 1991**To:** BILL ZAVIN**From:** Bill Carroll**Subject:** EXXON Proposal**Enclosure:** Discussion Topics

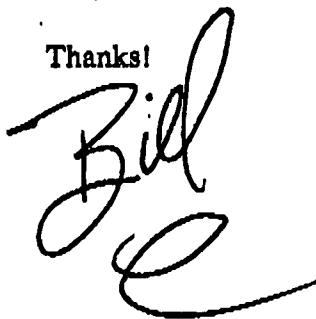
Bill,

Attached you will find a copy of some discussion topics for the EXXON proposal. They pertain to the type of proposal you would like developed, the content of that proposal, some questions about EXXON and our current working relationship, and my thoughts as to a possible approach to this program.

This information is by no means all that will be needed, but it will help me to kick-off my proposal development process by making sure that I am working in concert with your goals.

I would appreciate it if you would review this information with an eye toward further discussion with myself and Dick Camacho by phone on Tuesday. The "General Thoughts" area presents some concepts for our approach to the structure and implementation of the program. I have discussed this document with Dick, but your pro's and con's are needed. If Tuesday is too soon for you to respond, please let me know, and I will reschedule according to your needs.

Thanks!

A handwritten signature in black ink, appearing to read "Bill Carroll", with a large, stylized flourish at the end.

EXXON PROPOSAL DISCUSSIONS

STRUCTURE

1. GOAL: ONE AVAILABILITY OR ALL WEST COAST ASSETS?
2. FORMAT: NARRATIVE WITH TYPICAL PROPOSAL STRUCTURE, EXHIBITS, ETC., OR BULLETS
3. TARGET AUDIENCE: UPPER LVL MGMNT, TECHNICAL MGMNT, FIELD PERSONNEL
4. DETAIL LEVEL: SUMMARY, SYSTEMS, EQUIPMENT
5. SIZE

CONTENT

1. TOPICS: EXPERIENCE, FACILITIES, TECHNICAL APPROACH (ADVANCE PLANNING, PRODUCTION, LESSONS LEARNED), COST
2. DO WE ASSIGN A CORPORATE LEVEL CAM TO MANAGE THE PROGRAM?
3. LEVEL OF EFFORT FOR ADVANCE PLANNING. DO WE DEVELOP SPECS, DRAWINGS, ORDER MATERIAL, STAGE CFE?
4. DO WE USE THE NOTIONAL WORK PACKAGE CONCEPT?
5. DO WE USE A STANDARD RATE FOR ALL DIVISIONS? CAN WE ANTICIPATE ENOUGH VOLUME TO JUSTIFY DISCOUNTED RATES?

GENERAL QUESTIONS

1. HOW LONG BEFORE AN AVAILABILITY DOES EXXON PUT OUT THE BID?
2. DOES EXXON PROVIDE A BID SPEC PACKAGE? IS IT COMPLETE WITH ALL DRAWINGS, MATERIAL REQUIREMENTS, ETC; OR DO WE HAVE TO DO A LOT OF SHIPCHECKING? ARE THE SPECS TECHNICALLY ACCURATE; OR ARE THERE SERIOUS FLAWS? IS THE GROWTH WE GET DUE TO POOR SPECS WHICH DO NOT DEFINE THE WORK ACCURATELY; OR TO ADDITIONAL WORK TURNED ON AFTER AVAILABILITY START?
3. CAN WE OBTAIN A SCHEDULE FOR WEST COAST EXXON SHIP REPAIR CYCLES?
4. WHO PUTS OUT THE SPEC? DO WE HAVE GOOD CONTACTS/RAPPORT?
5. WHO IS OUR COMPETITION AND WHAT DO THEY OFFER?
6. WHAT, ASIDE FROM THE COMPETITION, ARE THE MAJOR PROBLEMS WE ENCOUNTER WITH THE CURRENT WAY OF DOING BUSINESS W/EXXON? FOR EXAMPLE, IS GROWTH A PROBLEM; OR IS THE WAY WE MANAGE GROWTH A PROBLEM? THE BASIC QUESTION HERE IS: IF WE ENTER INTO THIS AGREEMENT, WILL OUR PROBLEMS BE SOLVED OR INCREASED? CAN WE DELIVER WHAT WE PROMISE?
7. WHAT WOULD MOTIVATE EXXON TO ENTER INTO THIS AGREEMENT? MONEY, CONVENIENCE, ?

8. WHO DOES THEIR ADVANCE PLANNING NOW? CAN THEY BE SUPPLANTED? IS EXXON WILLING TO PAY FOR ADVANCE PLANNING WHEN THEY ALLREADY HAVE THAT CAPABILITY IN HOUSE OR OUR COMPETITION DOES IT FOR FREE?

GENERAL THOUGHTS

MY THOUGHTS ARE THAT WE SHOULD PROPOSE A TWO OR THREE SHIP TEST PERIOD, WITH OUR PROGRAM SPLIT INTO THREE BASIC PHASES FOR EACH SHIP: ADVANCE PLANNING, PRODUCTION, AND LESSONS LEARNED. THESE PHASES ARE CYCLICAL IN NATURE, AND SHOULD RESULT IN INCREASED EFFICIENCY DURING THE SECOND AND THIRD AVAILABILITIES. ADVANCE PLANNING FOR THE FIRST AVAILABILITY WOULD BE THE MOST DIFFICULT PHASE; SINCE THERE MAY BE A GENERAL LACK OF FAMILIARITY WITH BOTH SHIPBOARD AND MANAGEMENT SYSTEMS, AS WELL AS PERSONNEL, ON BOTH SIDES. THE JOINT ADVANCE PLANNING PHASE WILL, HOWEVER, PROVIDE SIGNIFICANT ADVANTAGES TO BOTH PARTIES, SINCE IT WILL EXPOSE PROBLEM AREAS IN SPEC INTERPRETATION AND PRODUCTION APPROACHES UP FRONT, ALLOWING FOR RESOLUTION PRIOR TO START OF AVAILABILITY. PROPER ADVANCE PLANNING SHOULD LEAD TO A MORE EFFICIENT AND LESS COSTLY PRODUCTION PERIOD, WHICH SHOULD THEN BE FOLLOWED UP BY A LESSONS-LEARNED SESSION TO DISCUSS AND RESOLVE PROBLEM AREAS AND INCORPORATE SOLUTIONS INTO THE ADVANCE PLANNING EFFORTS FOR THE SECOND SHIP. THE ACTUAL SCOPE OF PRODUCTION WORK CAN BE PLACED INTO THREE TYPES: ROUTINE MAINTENANCE (EASILY SCHEDULED), EMERGENT WORK/VOYAGE REPAIRS (SOME COULD BE SHIFTED TO ROUTINE MAINTENANCE), AND UPGRADES/ALTERATIONS ACCOMPLISHED TO IMPROVE THE SHIPS'S OPERATING CAPABILITIES.

ADVANCE PLANNING

FOR THE FIRST AVAILABILITY, AT ABOUT A-90, SWM WOULD NEGOTIATE A RATE AND A BASELINE MANHOUR BUDGET BASED ON EXXON DEVELOPED SPECS. SWM WOULD THEN REVIEW THE SPECS AND PERFORM SHIPCHECK(S) WITH THE PORT ENGINEER TO IDENTIFY ANY ADDITIONAL WORK REQUIRED. THIS WOULD INVOLVE NEGOTIATIONS TO DETERMINE "INTENT" AND WOULD SERVE TO CLARIFY WORK SCOPE INTERPRETATION PROBLEM AREAS FOR FUTURE AVAILABILITIES (IN OTHER WORDS, DISCUSSIONS ABOUT THE INTENT OF THE SPEC AND OUR INTERPRETATION OF THE SPEC WOULD LEAD TO BOTH PARTIES AGREEING ON CHANGES WHICH WOULD ENHANCE FUTURE SPEC CLARITY). THIS IS AN AREA WHERE SWM MIGHT BE ABLE TO PROVIDE SERVICE BY WRITING EXXON SPECS IN A FORMAT READILY FAMILIAR TO PRODUCTION TYPES. THE SALES KEY HERE IS THAT IF SWM DEVELOPS THE SPECS, SWM IS RESPONSIBLE FOR ANY SPEC PROBLEMS SUCH AS LACK OF WORK DEFINITION. SWM WOULD ALSO ASSIST (AS NEEDED) IN THE DEVELOPMENT OF MATERIAL SCHEDULES, SOURCING LLTM, DRAWING DEVELOPMENT AND OTHER ADVANCE PLANNING TASKS SELECTED BY THE CUSTOMER FROM A SWM-PROVIDED

SHOPPING LIST OF SERVICES. SINCE NEITHER SWM NOR EXXON SENIOR MGMNT WILL PROBABLY BE WILLING TO ABSORB ALL COSTS FOR THIS INITIAL ADVANCE PLANNING EFFORT, I WOULD RECOMMEND PROPOSING SHARED EXPOSURE IN THIS AREA. THAT WAY WE ARE SHOWING SOME UP-FRONT COMMITMENT, AND ALSO KEEPING ANY PRODUCTS WE DEVELOP FROM BECOMING THEIR PROPERTY. ADVANCE PLANNING COSTS WOULD SHIFT TO EXXON AS WE PROVED THEIR VALUE TO THE CUSTOMER THROUGH INCREASED PRODUCTIVITY AND LOWER PRODUCTION COSTS TO EXXON. PART OF OUR INITIAL ADVANCE PLANNING EFFORT SHOULD BE TO SET UP A MAINTENANCE SCHEDULE FOR ALL SHIPBOARD EQUIPMENT REQUIRING ROUTINE MAINTENANCE SUCH AS TUNE-UPS, FLUID CHANGES, OR CLEANING FOR A FIVE YEAR PERIOD COMMENCING WITH THE FIRST AVAILABILITY. THIS WOULD PROBABLY ADD NEW WORK TO THE PACKAGE AS WELL AS GET THEM THINKING ABOUT SWM LONGTERM. THE MAJOR PROBLEMS WITH ADVANCE PLANNING ARE COST AND REDUNDANCY. WILL EXXON PAY FOR PRODUCTS THAT OUR COMPETITION WILL SUPPLY FOR FREE OR THEIR IN-HOUSE RESOURCES ALLREADY PROVIDE? WE WILL HAVE TO CONVINCE THEM OF THE VALUE OF OUR PARTICIPATION, AND DO A BETTER JOB THAN OUR COMPETITION OR THEIR IN-HOUSE RESOURCES; OR MOVE ADVANCE PLANNING COSTS INTO OUR OVERHEAD RATES.

PRODUCTION

THE PRODUCTION PERIOD SHOULD BE MARKED BY TWO KEY ELEMENTS: LOTS OF SMART HARD WORK AND LOTS OF COMMUNICATION. WE NEED TO BEAR IN MIND THAT WE ARE LOOKING TO ESTABLISH TRUST. WE NEED TO HAVE A GOOD, VISIBLE PLAN AND WORK TO IT. BUT WE ALSO NEED TO MONITOR OUR MISTAKES CAREFULLY AND OPENLY, DOCUMENTING THEM AND DISCUSSING THEM FREELY WITH THEIR PORT ENGINEER. WE MAY HAVE SOME NEGOTIATION PROBLEMS FOR REWORK, BUT THIS WILL ALL BECOME LESSONS-LEARNED, AND HOPEFULLY, NOT REPEATED ON THE SECOND AND THIRD SHIPS. WE SHOULD ALSO INSIST THAT NEW WORK BE PROPERLY SCOPED AND PRICED BEFORE WE ACCOMPLISH IT. THIS WILL IMPART SOME URGENCY, BUT WILL ALSO SERVE TO EMPHASIZE THE VALUE OF ADVANCE PLANNING. THE KEY TO THE PRODUCTION PERIOD WILL BE THE RELATIONSHIP WE HAVE WITH THEIR PORT ENGINEER. THE CAM WE SELECT TO REPRESENT SWM MUST BE PROFESSIONAL AND TECHNICALLY CAPABLE. HE MUST ALSO BE ABLE TO DEAL DIRECTLY WITH THE PORT ENGINEER. THAT IS WHY I QUESTION THE NEED FOR A PROJECT MANAGER, UNLESS WE ARE TALKING ABOUT A CORPORATE LEVEL CAM WHO HAS TOTAL RESPONSIBILITY FOR ALL EXXON WORK AT ALL SWM DIVISIONS.

LESSONS LEARNED

THIS IS THE POINT WHERE WE CAN EXAMINE WHAT WE AND THEY DID RIGHT OR WRONG. PROPER DOCUMENTATION OF THE PREVIOUS ADVANCE PLANNING AND PRODUCTION PERIOD WILL ALLOW US TO REVIEW SUCCESSES AND FAILURES, PINPOINT WHY THINGS HAPPENED; AND EITHER ENHANCE OR

DELETE THOSE ACTIONS FOR THE NEXT SHIP BY INCORPORATING THESE LESSONS INTO THE NEXT ADVANCE PLANNING PERIOD.

THE OBJECTIVE WOULD BE THAT BY THE END OF THE TWO OR THREE SHIP TEST PERIOD, EXXON AND SWM WOULD BE REAPING VISIBLE BENEFITS, ENOUGH TO ALLOW EXXON TO COMMIT TO A LONG TERM RELATIONSHIP WITH SWM PROVIDING AN ALMOST TURN-KEY MAINTENANCE PROGRAM FOR EXXON SHIPS.

Exxon Free

MEMORANDUM



To: Bill Zavin
From: Matthew Spaleta *MS*

Date: 25 June 1991

Subject: Exxon Account

The following is a brief compilation of the work we have accomplished for Exxon:

EXXON BARGE 502

Port Engineer - Herb Forthuber

Dates - 5/16/91 to 5/17/91

Location - Pier 4

Work Accomplished - Install Panama Chocks

EXXON NEW ORLEANS

Port Engineer - Ed McDonald

Dates - 3/18/91 to 4/2/91

Location - Pier 4

Work Accomplished - Cargo Deepwell Pump Overhaul
Install 40' Temporary Portable Generator
Steel Repairs

EXXON JAMESTOWN

Port Engineer - Ed McDonald

Dates - 12/31/90 to 1/15/91

Location - Pier 4

Work Accomplished - Blast and Paint Potable Water Tank
I.G.S Blower Overhaul

EXXON TUG MAINE

Port Engineer - Herb Forthuber

Dates - 4/23/90 to 5/2/90

Location - Pier 4

Work Accomplished - Oil Boom Wheel Installation

EXXON JAMESTOWN

Port Engineer - Ed McDonald

Dates - 8/28/89 to 9/1/89

Location - Pier 1

Work Accomplished - USCG and ABS Certificate Inspection
Cargo Pump
Deaerating Tank
Compressed Air Tank
H.P. Evaporator Main Condenser

EXXON TUG CALIFORNIA & BARGE 502

Port Engineer - Vedran Jelinovic

Dates - 8/7/89 to 8/17/89

Location - Pier 4

Work Accomplished - Sea Valves & Engine Room Bilge Cleaning
Install four (4) Deck Winches

EXXON WASHINGTON

Port Engineer - Ray Bender

Dates - 5/22/89 to 5/27/89

Location - Pier 1

Work Accomplished - USCG and ABS Certificate Inspection
Cargo Pump
Lifeboat Weight Test
Boiler Mounts

EXXON BARGE 502

Port Engineer - John Underwood

Dates - 12/22/87 to 2/28/88

Location - Pier 4

Work Accomplished - Fabricate & Install new Breakwater
Renew Cargo Valves
Fabricate & Install Aft. Void Stowage Rack

EXXON BARGE 502

Port Engineer - John Underwood

Dates - 4/13/88 to 4/15/88

Location - Pier 4

Work Accomplished - Towing Bridle
Renew Vapor Header Isolation Valve

EXXON BARGE 502

Port Engineer - Ron Kelly

Dates - 10/28/87 to 11/11/87

Location - Pier 4

Work Accomplished - Crop out and renew Notch Push Plate and
Internal

EXXON BOSTON

Port Engineer - Ron Kelly

Dates - 12/1/86 to 1/7/87

Location - Long Beach Anchorage

Work Accomplished - Clean and Gas Free Engine Room Bilge

MEMORANDUM



To: B. Zavín
From: M. Luzinski *SL*
Date: March 28, 1991
Subject: Point Paper for Exxon Proposal

Hope this is of assistance to you for your presentation.

EXXON BENICIA availability, March 8, 1991 to April 19, 1991.

- Production stated advance planning and material ordering 30 days prior to ship's arrival.
- Bid specs were edited prior to general distribution. Editing, in this situation, meant removal of all hold items and as needed/as directed spec portions from the bid spec. This eliminated erroneous time charging or material ordering for items not yet authorized. Cost savings.
- Detailed production networks and bar charts were developed, reviewed and revised to reflect up-to-date work scope changes prior to arrival.
- Daily work plans were developed from these schedules (Perrino will go into greater detail here).
- A field project management team was organized and dispatched to the job site. This has enhanced contract communications and has greatly assisted with negotiating all change orders prior to start of production work.

Team consists of:

- Project Manager
- Commercial Accounts Manager
- Estimator
- Lead Ship Superintendent
- Zone Ship Superintendent
- Clerical support

- Utilizing serialized method of submitting condition reports. Status of any, or all, condition reports available within minutes.
- Single point of contract for contractual matter was established at availability onset. This has eliminated confusion and unnecessary costs for both the shipyard and customer.

- Work progress is monitored and recorded twice weekly. Both NWM and Exxon evaluate progress independently and then top management from both teams meet to review concerns.
- New work field orders are immediately logged into NWM's mod log upon receipt from Exxon. This process allows a constant check and balance system to be established between Exxon's records and NWM's. Field orders are then traceable to whatever step in the estimating-pricing-settlement process they may be in.
- Daily turnover meetings are held first with NWM ship superintendents and craft foreman and then with NWM ship superintendents and Exxon's management team. This process greatly reduces the chances of miscommunication on the back shifts.
- Work item GANTT schedules are updated twice weekly to provide both management of NWM and Exxon up-to-date status of not only the entire project but also the detail needed to manage any one work item. Crafts receive the same document to everyone concerned with the project has the same current information.
- All bid specs and growth work items are maintained in a computer data base allowing fast and current updates to any document on this contract. This process will allow the final invoicing of the contract to happen within days of contract completion. This process will benefit both the Contractor and Exxon.

Bill, there are some other control and monitoring processes that Carl Perrino is using that might be of assistance to you for the proposal purposes.

Anything else, give me a call.

c: B. Johnston

EXXON PHASED MAINTENANCE

Production

- * Four (4) fully capable shipyards

- Portland
- San Francisco
- San Pedro
- San Diego

For berthing, services, complete range of skills, and management to support them.

- * Drydocking for large tankers

- Portland
- San Francisco

- * Drydocking for medium tankers

- San Diego

- * 4000 employees available with the flexibility to put the right talent in the right place to meet customer needs.

- * New approach to productivity awareness

- More detailed weekly planning at the supervisory level.
- More detailed daily planning at the workers level
- Analysis and feedback of variances
- Revisions of plans to reduce variances
- Increased awareness of progress and expected *at* completion

* Integrated production systems

- Use each others people
- Use each others paper
- Apply lessons learned at all locations.

* Integrated use of facilities and equipments

- Move portable equipment to meet job needs.
- Move work to utilize special capabilities at each shipyard

* Flexibility

800
426-0333

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MEMORANDUM



To: BILL ZAVIN
From: CHRIS LEWIS
Date: 27 MARCH 1991
Subject: EXXON PHASED MAINTENANCE NEGOTIATED PROCUREMENT

REFERENCE: (A) Bill Zavin memo dated 18 March 1991

In response to reference (A), I have prepared a brief narrative summary of what I consider to be the most effective approach to Planning and managing commercial contracts within the framework of a Phased Maintenance philosophy. Following the narrative summary you'll find a timetable of suggested events that should be considered minimum to achieve the desired results. Please note that I've chosen the "A minus" calendar approach where "A" denotes the "availability start" and the number following the "A" denotes the number of days away from "availability start".

NARRATIVE SUMMARY

I believe that while a typical customer looks for competitive pricing, he's probably more interested in obtaining the maximum amount of service in the least amount of time. I believe we can offer these benefits if a healthy and long term relationship can exist between our customer and ourselves. Our experience over the years with the U.S. Navy's Phased Maintenance program multi-ship/multi-year contracts greatly enhance our ability to develop a significant learning curve and establish a very good working relationship with our customer; The benefits of which are obvious for both the customer and contractor. The single most important reason the U.S. Navy decided to attempt Phased Maintenance in the early 1980's was one of the commercial repair philosophies of "If it ain't broke, don't fix it!". The Navy was successful in combining this element of the commercial repair approach with phasing its maintenance requirements. The Navy also allowed it's contractor, because of the 5 year or longer contract, to accomplish the engineering, or portions of it, and the pre-arrival planning effort. The contractor became responsible for the entire turn-key operation. He developed a "Corporate knowledge" of the customer's needs, likes/dislikes etc..

I propose that we approach Exxon with a similar philosophy whereby, if he is willing, we could offer a complete turn-key operation to him. He would not have to concern himself with any of the pre-arrival effort other than staying in close contact with his contractor and enhance the communication link that is so essential.

The elements of a successful commercial Phased Maintenance Concept are as follows:

- a. Develop work specifications or work packages from "owner" provided concepts or requirements.
- b. Develop working drawings as required from existing owner furnished information or from within.
- c. Accomplish design review as required.
- d. Identify, order and warehouse material/equipment, both contractor and owner furnished.
- e. Develop a project model critical path network.
- f. Develop and maintain project and management information/measurement data.
- g. Employ mutually agreeable change procedures.
- h. Employ approved quality assurance procedures.

In order to achieve the above in a timely manner and in order to offer optimum service with minimum down-time, the following time table is suggested as a guide:

- a. A-180; Owner provides known and anticipated requirements for major repairs and modifications along with owner furnished material lists.
- b. A-120; Owner provides known and anticipated requirements for routine repairs and minor modifications.
- c. A-90 Contractor provides cost proposal for Planning, engineering, Pre-manufacturing material/equipment requirements and production costs.
- d. A-80; Owner/Contractor negotiate/agree on cost proposal.
- e. A-75; Contractor Commence pre-arrival Planning, engineering and material purchasing.
- f. A-45 Contractor commence pre-manufacturing process.

- g. A-30; Owner provides supplemental requirements/changes, contractor/owner negotiate and incorporate changes.
- h. A-0 Commence availability.

P.S. If you want visual aids such as schedules, networks etc. let me know what and when.



March 18, 1991

Memo To: Chris Lewis
Phil Kuss
Mike Luzinski
Al Ovrom

From: Bill Zavin 

Subject: Exxon Phased Maintenance Negotiated Procurement

Please accept this note with my thanks for your commitment to provide a working "bullet type outline" of your segment of the Exxon Negotiated Procurement presentation. If you have any questions or are unable to do this work, please call me.

As a point of information, I have talked to Herb Leyendecker of Exxon, and he has yet to be able to give me a precise timetable for his and Dan Paul's availability to hear our presentation.

Please feel free to flesh out your remarks as much as you can. Fully developed thoughts and presentations are preferable to bullet outlines as your time permits. Again, thank you for your help.

cc: Herb Engel
Bill Johnston



Art Engel

Bill Zavín

August 16, 1990

Subject: Exxon San Francisco - Exxon Maintenance Proposal

Yesterday I spoke with Herb Leyendecker who was returning my earlier call to John Tompkins, Fleet Operations Manager of Exxon Shipping. John is out of town on Exxon business. I explained to Herb I was attempting to learn from John why Exxon had deviated from our general understanding and on an approach to the Exxon San Francisco, and also why they had deviated from their own apparent alternate course on the project. His response was as follows:

1. He agreed that John had indicated their lack of follow through on our proposal was a result of disjointed communication within Exxon due to varying travel schedules between himself and John. Our continued persistence is what kept each of the following evolutions moving forward.
2. He indicated that after looking at our proposal for the Exxon San Francisco for a negotiated procurement, they sent out requests for time and material proposals to evaluate where we were pricewise in the market.
3. He said they decided to go out for firm fixed price bid on a regular basis so they would have more time to evaluate our proposal and the negotiated project concept.
4. He said they became alarmed about the possibility of not getting a drydock in Portland because of bid and award timing, and so decided to make a time and material award. He indicated WSI had the low time and material rates and so they went with them. I asked if the difference in rates was significant. He indicated it was very significant. This squares with some highly reliable intelligence we gathered which showed that Doug priced his work below \$29 per hour S.T. and a \$10 per hour O.T. premium.
5. I asked about the status of the Southwest Marine Time and Material Proposal which had been requested and he said that John and he (Herb) are looking forward to pursuing the concept and doing work under it with us. I indicated I would do further follow up work on that process with John Tompkins when he returns from travel.

EXXON SHIPPING COMPANY

POST OFFICE BOX 1512 • HOUSTON, TEXAS 77251-1512 "EXXSHIP HOUSTON"

J. A. TOMPKINS
OCEAN FLEET SERVICES MANAGER

August 7, 1990

EXXON SAN FRANCISCO

Mr. William H. Zavin, II
Northwest Marine Iron Works
5555 N. Channel Avenue, Bldg. 2
Portland, Oregon 97217

Dear Sir:

The EXXON SAN FRANCISCO Biennial Repairs have been awarded on the basis of responses to our July 11 inquiry about a Time and Material Agreement. Although your bid was unsuccessful we would like to thank you for partaking in the bidding on the EXXON SAN FRANCISCO. We hope you will favor us with your same interest on future bids for Exxon vessels.

Very truly yours,



H. P. Leyendecker
Repair Coordinator

HPL:lc

cc: Mr. S. W. McRobbie

2715b/2716b



NWMAR130946

EXXON SHIPPING COMPANY

POST OFFICE BOX 84 • LINDEN, NEW JERSEY 07036-0084 "STANSHIP NEW YORK"

EAST COAST BRANCH

L. T. SNEAD
MAINTENANCE AND SERVICES COORDINATOR

K. D. MUELLER
OPERATIONS COORDINATOR

M. L. MEADOR
PORT CAPTAIN

January 15, 1990

Work Agreement Contract

Mr. John J. O'Donnell
Commercial Vessel Repair Manager
Southwest Marine Inc.
Foot of 20th Street
San Francisco, CA 94107

Dear John:

Exxon Shipping Company's operating guidelines require that when business activity warrants, such business shall be covered under an appropriate contract.

Accordingly, attached for your review and approval are triplicate copies of a Work Agreement Contract between Southwest Marine Inc. and Exxon Shipping Company. We propose that the effective date of the Contract be February 1, 1990.

Please furnish a copy of your current rate schedule which will become Exhibit "B" of the Contract and enter the effective date of the schedule on the face of the Contract.

If the terms and conditions of the Contract are satisfactory, please return all copies, executed by an authorized representative of your company, to our office for further action. A copy of the fully executed Contract will be returned to you under separate cover.

If you have any questions, please call me at (201) 474-7181.



K. D. Mueller

KDM/kd
Attachments
(258)

cc: D. G. Lunceford (w/o attach.)
L. T. Snead " "

NWMAR130947

WORK AGREEMENT CONTRACT

Dated: January 15, 1990

AGREEMENT between **EXXON SHIPPING COMPANY**, an affiliate of Exxon Corporation, with an office in Linden, New Jersey, (hereinafter called "Company"), and **SOUTHWEST MARINE INC.** (hereinafter called "Contractor").

**DESCRIPTION
OF WORK:**

Contractor shall perform the following work for Company:

Provide complete vessel repair and/or renewal services as outlined in Exhibit A and as directed by an authorized Representative of the Company.

**AGREEMENT
PRICE:**

Company shall pay Contractor for said work as per rates outlined in Exhibit B.

**PERIOD OF
PERFORMANCE:**

One (1) year as of date parties execute this Agreement and from year to year thereafter; provided, however, that either Company or Contractor may terminate this Agreement at anytime during the term hereof by giving 30 days written notice to the other party hereto.

**OTHER TERMS
AND PROVISIONS:**

This agreement and the attached exhibits contain all the terms and conditions agreed upon by the parties hereto with respect to the work to be performed hereunder and all matters which in any way affect said work, and no other agreements, oral or otherwise, regarding the subject matter of this contract shall be deemed to exist or to bind either of the parties.

Exhibit "A" Work Specifications
Exhibit "B" Agreement Rates dated

CONTRACTOR:
SOUTHWEST MARINE INC.

COMPANY:
EXXON SHIPPING COMPANY

BY: _____

BY: _____
Inland Fleet Manager

Witness

Witness

WORK SPECIFICATIONS

EXHIBIT A

Title of Services: Repair and/or Renewal Services

Specifications:

Contractor shall perform the following work in accordance with the following specifications:

100 GENERAL

101 Subject to the terms and conditions hereof, Contractor agrees to perform all services requested by Company on board its owned or demise chartered vessels as hereinafter described and in connection therewith to perform such work, all in accordance with the rate schedule attached hereto.

102 Contractor shall provide these services on an as called basis, 24 hours per day, seven days per week for the term of the agreement.

200 SCOPE OF WORK

201 Contractor shall provide all supervision, material, labor, tools, equipment and transportation necessary for the work as outlined and requested by the Company.

202 Contractor shall comply with all requirements of any regulatory agency having jurisdiction.

203 Contractor shall perform the services hereinabove described as an independent contractor in a diligent and workmanlike manner. Contractor shall not be liable for any failure to perform the hereinabove described services, caused by an act of God, any storm or other natural occurrence, explosion, strike, war or act of a foreign enemy, acts or omissions of Company, its agents or servants or any other cause beyond the reasonable control of Contractor. Contractor shall use reasonable efforts to perform the hereinabove services promptly, maintained at a high level, and as quickly as possible to enable the vessel to be restored to service with minimum delay.

204 All work shall be carried out and completed by Contractor to meet the requirements of the Classification Society and the Marine Inspection Service of the U. S. Coast Guard.

205 If any of the vessel's machinery, equipment or fittings are used by Contractor for any purpose whatsoever, Contractor shall be responsible for their reconditioning, if necessary, and shall make good any damages resulting from such use.

300 RATES

- 301 All rates utilized under this contract shall be as agreed to in writing from time-to-time by the parties hereto. Contractor shall submit request for any change in rates in writing not less than thirty (30) days prior to anticipated effective date.
- 302 Company agrees to pay Contractor for the services hereunder described at the rates specified. Terms of payment shall be as follows:
- 302.1 Net 30 days from date of receipt of invoice.
 - 302.2 Interim bills may be rendered at intervals of not less than seven days during the continuation of jobs requiring more than seven days for completion and Company will advance to Contractor eighty-five percent (85%) of the amount due for work then completed.
 - 302.3 It is understood and agreed that premium time shall not be paid by Company unless authorized by Company and only to the extent that Contractor has paid premium rate to said Contractor's employee.
 - 302.4 Contractor agrees to maintain adequate books, payrolls and records satisfactory to Company in connection with any and all work performed hereunder. Contractor further agrees to retain all such books, payrolls, and records pertaining to all such work for a period of not less than three (3) years after completion of such work. Company and its duly authorized representative shall have access at all reasonable times to the books, payrolls, and records maintained by Contractor relating to any of the work performed hereunder and shall have the right to audit such books, payrolls, and records at any reasonable time or times. Contractor further agrees that where labor or equipment is supplied by a subcontractor, or other third party, Contractor will execute an agreement with such party giving Company the right, acting as Contractor's agent, to audit the books, payrolls and records relating to any of the work performed hereunder.

400 WARRANTY

- 401 Contractor warrants that its workmanship shall conform to the highest standards of the trade and all applicable regulatory agencies. In the event that any defects in workmanship performed or materials installed or fabricated by Contractor hereunder other than defects which are due to normal "wear and tear" or "misuse" are discovered within ninety (90) days after completion of the Work, Contractor shall expeditiously repair or replace the defective parts or Work at Contractor's expense or, if mutually agreed, shall pay Company such sum as will be equal to the agreed estimated cost of repairing or replacing the defective parts and/or to remedy the defective workmanship. Further, any extra Work required as a result of Contractor's negligence is for Contractor's account. Contractor shall also secure the extension to Company of all manufacturer's warranties existing on machinery and equipment installed hereunder.

500 UNDERTAKINGS OF COMPANY

- 501 Company agrees to cooperate with and to cause its employees and agents to cooperate with Contractor so as not to hinder the performance by Contractor of the services to be performed by Contractor hereunder.

600 REPORTS

- 601 Contractor shall prepare and deliver each day to Company (or its agent) a daily time report for all labor and equipment describing the services performed by Contractor on the day preceding the date on which such report is delivered. Company shall promptly report any errors or omissions in such reports. Such reports will be the basis for invoicing. Contractor further agrees that a copy of the foregoing reports shall also be submitted as support data with Contractor's invoice mailed to Exxon Shipping Company, P. O. Box 84, Linden, New Jersey 07036. The reports shall be signed by Contractor's supervisor or foreman and Exxon's authorized representative and completed in the following manner: For all labor, each report shall list name of Contractor's employee, their occupational classification, the number of hours worked, hourly billing rate of pay and the dollar extension thereof (hours times rate); for equipment, the report shall be compiled to show the item used, the number of hours used, the appropriate hourly or flat rate and the dollar extension thereof; for materials and supplies each report shall itemize units consumed, quantity of each, cost per unit and total dollar extension thereof. All such data shall be neatly and orderly compiled and easily traceable to the recapitulation totals on the invoice.
- 602 Upon payment in full to Contractor for services performed hereunder, Contractor agrees to hold Company harmless with respect to claims by third persons for payment for labor, materials, and equipment used by Contractor in connection with Contractor's performance of services pursuant hereto. Contractor further warrants the vessel shall be and remain free of all liens arising out of the work, and in the event any claim or lien is asserted against the vessel arising out of the work, Contractor shall satisfy such claim and shall discharge such lien.

700 ADDITIONAL PROVISIONS OF AGREEMENT

- 701 At all times while on Company's vessel or premises, Contractor is to observe and be subject to such rules and regulations as Company from time-to-time may promulgate for security reasons or for minimizing fire and explosion risks and for the maintenance or restoration of good order, and to compel observance thereof by Contractor's employees and agents and others entering upon property in the performance of or in connection with said work. Contractor shall take steps to assure that its employees or employees of its subcontractors at all times observe the reasonable rules and regulations while entering, leaving or on Company property, and shall cause them to be removed from such property upon their failure to comply.

- 702 Contractor accepts full exclusive responsibility and liability for payment of federal and state payroll taxes and for contributions for unemployment insurance, old age pensions, annuities, retirement and other benefits, imposed or assessed under any provisions of any law, state or federal, and measured by wages, salaries or other remuneration paid or payable by Contractor to employees of Contractor engaged in said work or in any operations incidental thereto, or by voluntary or contractual benefit plans between Contractor and its employees which require contributions by Contractor, and agrees that each subcontractor who performs any part of said work will accept the same responsibility and liability with respect to employees of such subcontractor.
- 703 Contractor shall be responsible for and shall indemnify, defend and save harmless the Company and all owned, controlled, affiliated, subsidiary, associated, interrelated and operated companies and the stockholders, directors, officers, agents, and employees of each from and against all claims, demands, and causes of action brought by any and all persons, including without limitation Contractor's officers, agents, and employees, representatives, or subcontractors or by any third parties, and against any and all judgments in respect thereto on account of bodily injury including death or on account of property damage arising out of or in connection with or by reason of work done by Contractors, its employees, agents, representatives or subcontractors, expressly excepting, however, any loss or damage caused by the sole negligence of said Company, their employees, agents, or representatives.
- 704 Contractor agrees to protect its employees by carrying Workers' Compensation insurance, employer's or shipbuilder's liability insurance and all insurance required by Federal, state or local statutes or ordinances applicable to coverage for employees where the Work or any part thereof is performed hereunder, or in lieu thereof, shall secure the payment of the compensation provided for by such acts. If any part of the work is subcontracted, Contractor shall require each subcontractor to provide the Workers' Compensation and Employer's Liability insurance pursuant to the foregoing unless said employees are covered under Contractors insurances. It is further expressly understood that all workmen engaged in the Work hereunder shall at all times be employees of Contractor or its subcontractors and not employees of Company. Contractor agrees to insure against risk of loss or damage to any and all property and injury to, or death of any person, including, but not limited to, its own employees, agents, and representatives and any third party, occasioned by arising out of, or incurred in connection with the work in the minimum amount of \$300,000.00 and Contractor shall require its subcontractors, if any, to obtain all their customary insurances, proof of which by certificates of insurances shall be furnished by Contractor to Company upon request. Said insurance policies shall provide for at least thirty (30) days' advance notice to Company of cancellation. Contractor agrees to purchase all insurance required in this Article in keeping with the minimum requirements hereof from companies acceptable to Company and to furnish Company, upon request from time-to-time, with satisfactory evidence that such insurance is in conformity with the

minimum requirements thereof and when requested to do so, shall furnish Company with certified copies of all such insurance policies. Should Contractor at any time neglect or refuse to provide any insurance required herein, or should any insurance be cancelled, Company shall have the right to procure such insurance with the cost therefor deducted from any invoice amount payable to Contractor by Company.

705 Contractor agrees to comply with all laws and lawful regulations applicable to any activities carried out in the name of or representative of Exxon Shipping Company under the provisions of this agreement and/or amendments to it. Contractor agrees that all financial settlements, billings, and reports rendered to Exxon Shipping Company, as provided for in this agreement and/or any amendments to it will reflect properly the facts about all activities and transactions handled for the account of Exxon Shipping Company, which data may be relied upon as being complete and accurate in any further recording and reporting made by Exxon Shipping Company, for whatever purpose. Contractor agrees to notify Exxon Shipping Company promptly upon discovery of any instances where the Contractor fails to comply with provisions above.

706 In performing its obligations hereunder, Contractor shall comply with the Fair Labor Standards Act of 1938 and all other applicable laws and with all applicable orders, rules and regulations of constituted authority, and laws, orders, rules, and regulations relating to pollution, and Contractor shall indemnify Exxon from any lien that may arise out of, or result from, Contractor's violation of any such laws, order, rule or regulations.

During the performance of this agreement, and any and all supplements and amendments thereto, to the extent possible, Contractor agrees to comply with requirements of the Federal Government with respect to the maintenance of non-segregated facilities, equal employment opportunity, Veteran's Preference, Minority Businesses, and hiring of the handicapped.

707 Contractor shall exercise reasonable care and diligence to prevent any actions or conditions which could result in a conflict with Exxon's best interests. This obligation shall apply to the activities of the employees and agents of Contractor in their relations with the employees, and their families, of Exxon and of third parties arising from this Agreement and accomplishing work hereunder. Contractor's efforts shall include, but not be limited to, establishing precautions to prevent its employees or agents from making, receiving, providing, or offering substantial gifts, entertainments, payments, loans, or other considerations for the purpose of influencing individuals to act contrary to Exxon's best interests.

708 Contractor shall not assign its rights or obligations or any sums that may accrue to it hereunder without the written consent of Company first having been obtained. Subcontracting of any of the work shall not relieve Contractor of its responsibilities and obligations under this agreement.

709 THIS AGREEMENT SHALL BE GOVERNED BY AND CONSTRUED ACCORDING TO THE LAWS OF THE STATE OF TEXAS.

WORK AGREEMENT CONTRACT

Dated: January 15, 1990

AGREEMENT between **EXXON SHIPPING COMPANY**, an affiliate of Exxon Corporation, with an office in Linden, New Jersey, (hereinafter called "Company"), and **SOUTHWEST MARINE INC.** (hereinafter called "Contractor").

**DESCRIPTION
OF WORK:**

Contractor shall perform the following work for Company:

Provide complete vessel repair and/or renewal services as outlined in Exhibit A and as directed by an authorized Representative of the Company.

**AGREEMENT
PRICE:**

Company shall pay Contractor for said work as per rates outlined in Exhibit B.

**PERIOD OF
PERFORMANCE:**

One (1) year as of date parties execute this Agreement and from year to year thereafter; provided, however, that either Company or Contractor may terminate this Agreement at anytime during the term hereof by giving 30 days written notice to the other party hereto.

**OTHER TERMS
AND PROVISIONS:**

This agreement and the attached exhibits contain all the terms and conditions agreed upon by the parties hereto with respect to the work to be performed hereunder and all matters which in any way affect said work, and no other agreements, oral or otherwise, regarding the subject matter of this contract shall be deemed to exist or to bind either of the parties.

Exhibit "A" Work Specifications
Exhibit "B" Agreement Rates dated

CONTRACTOR:
SOUTHWEST MARINE INC.

COMPANY:
EXXON SHIPPING COMPANY

BY: _____

BY: _____
Inland Fleet Manager

Witness

Witness

WORK SPECIFICATIONS

EXHIBIT A

Title of Services: Repair and/or Renewal Services

Specifications:

Contractor shall perform the following work in accordance with the following specifications:

100 GENERAL

101 Subject to the terms and conditions hereof, Contractor agrees to perform all services requested by Company on board its owned or demise chartered vessels as hereinafter described and in connection therewith to perform such work, all in accordance with the rate schedule attached hereto.

102 Contractor shall provide these services on an as called basis, 24 hours per day, seven days per week for the term of the agreement.

200 SCOPE OF WORK

201 Contractor shall provide all supervision, material, labor, tools, equipment and transportation necessary for the work as outlined and requested by the Company.

202 Contractor shall comply with all requirements of any regulatory agency having jurisdiction.

203 Contractor shall perform the services hereinabove described as an independent contractor in a diligent and workmanlike manner. Contractor shall not be liable for any failure to perform the hereinabove described services, caused by an act of God, any storm or other natural occurrence, explosion, strike, war or act of a foreign enemy, acts or omissions of Company, its agents or servants or any other cause beyond the reasonable control of Contractor. Contractor shall use reasonable efforts to perform the hereinabove services promptly, maintained at a high level, and as quickly as possible to enable the vessel to be restored to service with minimum delay.

204 All work shall be carried out and completed by Contractor to meet the requirements of the Classification Society and the Marine Inspection Service of the U. S. Coast Guard.

205 If any of the vessel's machinery, equipment or fittings are used by Contractor for any purpose whatsoever, Contractor shall be responsible for their reconditioning, if necessary, and shall make good any damages resulting from such use.

300 RATES

- 301 All rates utilized under this contract shall be as agreed to in writing from time-to-time by the parties hereto. Contractor shall submit request for any change in rates in writing not less than thirty (30) days prior to anticipated effective date.
- 302 Company agrees to pay Contractor for the services hereunder described at the rates specified. Terms of payment shall be as follows:
- 302.1 Net 30 days from date of receipt of invoice.
 - 302.2 Interim bills may be rendered at intervals of not less than seven days during the continuation of jobs requiring more than seven days for completion and Company will advance to Contractor eighty-five percent (85%) of the amount due for work then completed.
 - 302.3 It is understood and agreed that premium time shall not be paid by Company unless authorized by Company and only to the extent that Contractor has paid premium rate to said Contractor's employee.
 - 302.4 Contractor agrees to maintain adequate books, payrolls and records satisfactory to Company in connection with any and all work performed hereunder. Contractor further agrees to retain all such books, payrolls, and records pertaining to all such work for a period of not less than three (3) years after completion of such work. Company and its duly authorized representative shall have access at all reasonable times to the books, payrolls, and records maintained by Contractor relating to any of the work performed hereunder and shall have the right to audit such books, payrolls, and records at any reasonable time or times. Contractor further agrees that where labor or equipment is supplied by a subcontractor, or other third party, Contractor will execute an agreement with such party giving Company the right, acting as Contractor's agent, to audit the books, payrolls and records relating to any of the work performed hereunder.

400 WARRANTY

- 401 Contractor warrants that its workmanship shall conform to the highest standards of the trade and all applicable regulatory agencies. In the event that any defects in workmanship performed or materials installed or fabricated by Contractor hereunder other than defects which are due to normal "wear and tear" or "misuse" are discovered within ninety (90) days after completion of the Work, Contractor shall expeditiously repair or replace the defective parts or Work at Contractor's expense or, if mutually agreed, shall pay Company such sum as will be equal to the agreed estimated cost of repairing or replacing the defective parts and/or to remedy the defective workmanship. Further, any extra Work required as a result of Contractor's negligence is for Contractor's account. Contractor shall also secure the extension to Company of all manufacturer's warranties existing on machinery and equipment installed hereunder.

500 UNDERTAKINGS OF COMPANY

- 501 Company agrees to cooperate with and to cause its employees and agents to cooperate with Contractor so as not to hinder the performance by Contractor of the services to be performed by Contractor hereunder.

600 REPORTS

- 601 Contractor shall prepare and deliver each day to Company (or its agent) a daily time report for all labor and equipment describing the services performed by Contractor on the day preceding the date on which such report is delivered. Company shall promptly report any errors or omissions in such reports. Such reports will be the basis for invoicing. Contractor further agrees that a copy of the foregoing reports shall also be submitted as support data with Contractor's invoice mailed to Exxon Shipping Company, P. O. Box 84, Linden, New Jersey 07036. The reports shall be signed by Contractor's supervisor or foreman and Exxon's authorized representative and completed in the following manner: For all labor, each report shall list name of Contractor's employee, their occupational classification, the number of hours worked, hourly billing rate of pay and the dollar extension thereof (hours times rate); for equipment, the report shall be compiled to show the item used, the number of hours used, the appropriate hourly or flat rate and the dollar extension thereof; for materials and supplies each report shall itemize units consumed, quantity of each, cost per unit and total dollar extension thereof. All such data shall be neatly and orderly compiled and easily traceable to the recapitulation totals on the invoice.
- 602 Upon payment in full to Contractor for services performed hereunder, Contractor agrees to hold Company harmless with respect to claims by third persons for payment for labor, materials, and equipment used by Contractor in connection with Contractor's performance of services pursuant hereto. Contractor further warrants the vessel shall be and remain free of all liens arising out of the work, and in the event any claim or lien is asserted against the vessel arising out of the work, Contractor shall satisfy such claim and shall discharge such lien.

700 ADDITIONAL PROVISIONS OF AGREEMENT

- 701 At all times while on Company's vessel or premises, Contractor is to observe and be subject to such rules and regulations as Company from time-to-time may promulgate for security reasons or for minimizing fire and explosion risks and for the maintenance or restoration of good order, and to compel observance thereof by Contractor's employees and agents and others entering upon property in the performance of or in connection with said work. Contractor shall take steps to assure that its employees or employees of its subcontractors at all times observe the reasonable rules and regulations while entering, leaving or on Company property, and shall cause them to be removed from such property upon their failure to comply.

- 702 Contractor accepts full exclusive responsibility and liability for payment of federal and state payroll taxes and for contributions for unemployment insurance, old age pensions, annuities, retirement and other benefits, imposed or assessed under any provisions of any law, state or federal, and measured by wages, salaries or other remuneration paid or payable by Contractor to employees of Contractor engaged in said work or in any operations incidental thereto, or by voluntary or contractual benefit plans between Contractor and its employees which require contributions by Contractor, and agrees that each subcontractor who performs any part of said work will accept the same responsibility and liability with respect to employees of such subcontractor.
- 703 Contractor shall be responsible for and shall indemnify, defend and save harmless the Company and all owned, controlled, affiliated, subsidiary, associated, interrelated and operated companies and the stockholders, directors, officers, agents, and employees of each from and against all claims, demands, and causes of action brought by any and all persons, including without limitation Contractor's officers, agents, and employees, representatives, or subcontractors or by any third parties, and against any and all judgments in respect thereto on account of bodily injury including death or on account of property damage arising out of or in connection with or by reason of work done by Contractors, its employees, agents, representatives or subcontractors, expressly excepting, however, any loss or damage caused by the sole negligence of said Company, their employees, agents, or representatives.
- 704 Contractor agrees to protect its employees by carrying Workers' Compensation insurance, employer's or shipbuilder's liability insurance and all insurance required by Federal, state or local statutes or ordinances applicable to coverage for employees where the Work or any part thereof is performed hereunder, or in lieu thereof, shall secure the payment of the compensation provided for by such acts. If any part of the work is subcontracted, Contractor shall require each subcontractor to provide the Workers' Compensation and Employer's Liability insurance pursuant to the foregoing unless said employees are covered under Contractors insurances. It is further expressly understood that all workmen engaged in the Work hereunder shall at all times be employees of Contractor or its subcontractors and not employees of Company. Contractor agrees to insure against risk of loss or damage to any and all property and injury to, or death of any person, including, but not limited to, its own employees, agents, and representatives and any third party, occasioned by arising out of, or incurred in connection with the work in the minimum amount of \$300,000.00 and Contractor shall require its subcontractors, if any, to obtain all their customary insurances, proof of which by certificates of insurances shall be furnished by Contractor to Company upon request. Said insurance policies shall provide for at least thirty (30) days' advance notice to Company of cancellation. Contractor agrees to purchase all insurance required in this Article in keeping with the minimum requirements hereof from companies acceptable to Company and to furnish Company, upon request from time-to-time, with satisfactory evidence that such insurance is in conformity with the

minimum requirements thereof and when requested to do so, shall furnish Company with certified copies of all such insurance policies. Should Contractor at any time neglect or refuse to provide any insurance required herein, or should any insurance be cancelled, Company shall have the right to procure such insurance with the cost therefor deducted from any invoice amount payable to Contractor by Company.

705 Contractor agrees to comply with all laws and lawful regulations applicable to any activities carried out in the name of or representative of Exxon Shipping Company under the provisions of this agreement and/or amendments to it. Contractor agrees that all financial settlements, billings, and reports rendered to Exxon Shipping Company, as provided for in this agreement and/or any amendments to it will reflect properly the facts about all activities and transactions handled for the account of Exxon Shipping Company, which data may be relied upon as being complete and accurate in any further recording and reporting made by Exxon Shipping Company, for whatever purpose. Contractor agrees to notify Exxon Shipping Company promptly upon discovery of any instances where the Contractor fails to comply with provisions above.

706 In performing its obligations hereunder, Contractor shall comply with the Fair Labor Standards Act of 1938 and all other applicable laws and with all applicable orders, rules and regulations of constituted authority, and laws, orders, rules, and regulations relating to pollution, and Contractor shall indemnify Exxon from any lien that may arise out of, or result from, Contractor's violation of any such laws, order, rule or regulations.

During the performance of this agreement, and any and all supplements and amendments thereto, to the extent possible, Contractor agrees to comply with requirements of the Federal Government with respect to the maintenance of non-segregated facilities, equal employment opportunity, Veteran's Preference, Minority Businesses, and hiring of the handicapped.

707 Contractor shall exercise reasonable care and diligence to prevent any actions or conditions which could result in a conflict with Exxon's best interests. This obligation shall apply to the activities of the employees and agents of Contractor in their relations with the employees, and their families, of Exxon and of third parties arising from this Agreement and accomplishing work hereunder. Contractor's efforts shall include, but not be limited to, establishing precautions to prevent its employees or agents from making, receiving, providing, or offering substantial gifts, entertainments, payments, loans, or other considerations for the purpose of influencing individuals to act contrary to Exxon's best interests.

708 Contractor shall not assign its rights or obligations or any sums that may accrue to it hereunder without the written consent of Company first having been obtained. Subcontracting of any of the work shall not relieve Contractor of its responsibilities and obligations under this agreement.

709 THIS AGREEMENT SHALL BE GOVERNED BY AND CONSTRUED ACCORDING TO THE LAWS OF THE STATE OF TEXAS.

WORK AGREEMENT CONTRACT

Dated: January 15, 1990

AGREEMENT between **EXXON SHIPPING COMPANY**, an affiliate of Exxon Corporation, with an office in Linden, New Jersey, (hereinafter called "Company"), and **SOUTHWEST MARINE INC.** (hereinafter called "Contractor").

**DESCRIPTION
OF WORK:**

Contractor shall perform the following work for Company:

Provide complete vessel repair and/or renewal services as outlined in Exhibit A and as directed by an authorized Representative of the Company.

**AGREEMENT
PRICE:**

Company shall pay Contractor for said work as per rates outlined in Exhibit B.

**PERIOD OF
PERFORMANCE:**

One (1) year as of date parties execute this Agreement and from year to year thereafter; provided, however, that either Company or Contractor may terminate this Agreement at anytime during the term hereof by giving 30 days written notice to the other party hereto.

**OTHER TERMS
AND PROVISIONS:**

This agreement and the attached exhibits contain all the terms and conditions agreed upon by the parties hereto with respect to the work to be performed hereunder and all matters which in any way affect said work, and no other agreements, oral or otherwise, regarding the subject matter of this contract shall be deemed to exist or to bind either of the parties.

Exhibit "A" Work Specifications
Exhibit "B" Agreement Rates dated

CONTRACTOR:
SOUTHWEST MARINE INC.

COMPANY:
EXXON SHIPPING COMPANY

BY: _____

BY: _____
Inland Fleet Manager

Witness

Witness

WORK SPECIFICATIONS

EXHIBIT A

Title of Services: Repair and/or Renewal Services

Specifications:

Contractor shall perform the following work in accordance with the following specifications:

100 GENERAL

101 Subject to the terms and conditions hereof, Contractor agrees to perform all services requested by Company on board its owned or demise chartered vessels as hereinafter described and in connection therewith to perform such work, all in accordance with the rate schedule attached hereto.

102 Contractor shall provide these services on an as called basis, 24 hours per day, seven days per week for the term of the agreement.

200 SCOPE OF WORK

201 Contractor shall provide all supervision, material, labor, tools, equipment and transportation necessary for the work as outlined and requested by the Company.

202 Contractor shall comply with all requirements of any regulatory agency having jurisdiction.

203 Contractor shall perform the services hereinabove described as an independent contractor in a diligent and workmanlike manner. Contractor shall not be liable for any failure to perform the hereinabove described services, caused by an act of God, any storm or other natural occurrence, explosion, strike, war or act of a foreign enemy, acts or omissions of Company, its agents or servants or any other cause beyond the reasonable control of Contractor. Contractor shall use reasonable efforts to perform the hereinabove services promptly, maintained at a high level, and as quickly as possible to enable the vessel to be restored to service with minimum delay.

204 All work shall be carried out and completed by Contractor to meet the requirements of the Classification Society and the Marine Inspection Service of the U. S. Coast Guard.

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- 301 All rates utilized under this contract shall be as agreed to in writing from time-to-time by the parties hereto. Contractor shall submit request for any change in rates in writing not less than thirty (30) days prior to anticipated effective date.
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- 302.3 It is understood and agreed that premium time shall not be paid by Company unless authorized by Company and only to the extent that Contractor has paid premium rate to said Contractor's employee.
- 302.4 Contractor agrees to maintain adequate books, payrolls and records satisfactory to Company in connection with any and all work performed hereunder. Contractor further agrees to retain all such books, payrolls, and records pertaining to all such work for a period of not less than three (3) years after completion of such work. Company and its duly authorized representative shall have access at all reasonable times to the books, payrolls, and records maintained by Contractor relating to any of the work performed hereunder and shall have the right to audit such books, payrolls, and records at any reasonable time or times. Contractor further agrees that where labor or equipment is supplied by a subcontractor, or other third party, Contractor will execute an agreement with such party giving Company the right, acting as Contractor's agent, to audit the books, payrolls and records relating to any of the work performed hereunder.

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- 401 Contractor warrants that its workmanship shall conform to the highest standards of the trade and all applicable regulatory agencies. In the event that any defects in workmanship performed or materials installed or fabricated by Contractor hereunder other than defects which are due to normal "wear and tear" or "misuse" are discovered within ninety (90) days after completion of the Work, Contractor shall expeditiously repair or replace the defective parts or Work at Contractor's expense or, if mutually agreed, shall pay Company such sum as will be equal to the agreed estimated cost of repairing or replacing the defective parts and/or to remedy the defective workmanship. Further, any extra Work required as a result of Contractor's negligence is for Contractor's account. Contractor shall also secure the extension to Company of all manufacturer's warranties existing on machinery and equipment installed hereunder.

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- 501 Company agrees to cooperate with and to cause its employees and agents to cooperate with Contractor so as not to hinder the performance by Contractor of the services to be performed by Contractor hereunder.

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- 601 Contractor shall prepare and deliver each day to Company (or its agent) a daily time report for all labor and equipment describing the services performed by Contractor on the day preceding the date on which such report is delivered. Company shall promptly report any errors or omissions in such reports. Such reports will be the basis for invoicing. Contractor further agrees that a copy of the foregoing reports shall also be submitted as support data with Contractor's invoice mailed to Exxon Shipping Company, P. O. Box 84, Linden, New Jersey 07036. The reports shall be signed by Contractor's supervisor or foreman and Exxon's authorized representative and completed in the following manner: For all labor, each report shall list name of Contractor's employee, their occupational classification, the number of hours worked, hourly billing rate of pay and the dollar extension thereof (hours times rate); for equipment, the report shall be compiled to show the item used, the number of hours used, the appropriate hourly or flat rate and the dollar extension thereof; for materials and supplies each report shall itemize units consumed, quantity of each, cost per unit and total dollar extension thereof. All such data shall be neatly and orderly compiled and easily traceable to the recapitulation totals on the invoice.
- 602 Upon payment in full to Contractor for services performed hereunder, Contractor agrees to hold Company harmless with respect to claims by third persons for payment for labor, materials, and equipment used by Contractor in connection with Contractor's performance of services pursuant hereto. Contractor further warrants the vessel shall be and remain free of all liens arising out of the work, and in the event any claim or lien is asserted against the vessel arising out of the work, Contractor shall satisfy such claim and shall discharge such lien.

700 ADDITIONAL PROVISIONS OF AGREEMENT

- 701 At all times while on Company's vessel or premises, Contractor is to observe and be subject to such rules and regulations as Company from time-to-time may promulgate for security reasons or for minimizing fire and explosion risks and for the maintenance or restoration of good order, and to compel observance thereof by Contractor's employees and agents and others entering upon property in the performance of or in connection with said work. Contractor shall take steps to assure that its employees or employees of its subcontractors at all times observe the reasonable rules and regulations while entering, leaving or on Company property, and shall cause them to be removed from such property upon their failure to comply.

- 702 Contractor accepts full exclusive responsibility and liability for payment of federal and state payroll taxes and for contributions for unemployment insurance, old age pensions, annuities, retirement and other benefits, imposed or assessed under any provisions of any law, state or federal, and measured by wages, salaries or other remuneration paid or payable by Contractor to employees of Contractor engaged in said work or in any operations incidental thereto, or by voluntary or contractual benefit plans between Contractor and its employees which require contributions by Contractor, and agrees that each subcontractor who performs any part of said work will accept the same responsibility and liability with respect to employees of such subcontractor.
- 703 Contractor shall be responsible for and shall indemnify, defend and save harmless the Company and all owned, controlled, affiliated, subsidiary, associated, interrelated and operated companies and the stockholders, directors, officers, agents, and employees of each from and against all claims, demands, and causes of action brought by any and all persons, including without limitation Contractor's officers, agents, and employees, representatives, or subcontractors or by any third parties, and against any and all judgments in respect thereto on account of bodily injury including death or on account of property damage arising out of or in connection with or by reason of work done by Contractors, its employees, agents, representatives or subcontractors, expressly excepting, however, any loss or damage caused by the sole negligence of said Company, their employees, agents, or representatives.
- 704 Contractor agrees to protect its employees by carrying Workers' Compensation insurance, employer's or shipbuilder's liability insurance and all insurance required by Federal, state or local statutes or ordinances applicable to coverage for employees where the Work or any part thereof is performed hereunder, or in lieu thereof, shall secure the payment of the compensation provided for by such acts. If any part of the work is subcontracted, Contractor shall require each subcontractor to provide the Workers' Compensation and Employer's Liability insurance pursuant to the foregoing unless said employees are covered under Contractors insurances. It is further expressly understood that all workmen engaged in the Work hereunder shall at all times be employees of Contractor or its subcontractors and not employees of Company. Contractor agrees to insure against risk of loss or damage to any and all property and injury to, or death of any person, including, but not limited to, its own employees, agents, and representatives and any third party, occasioned by arising out of, or incurred in connection with the work in the minimum amount of \$300,000.00 and Contractor shall require its subcontractors, if any, to obtain all their customary insurances, proof of which by certificates of insurances shall be furnished by Contractor to Company upon request. Said insurance policies shall provide for at least thirty (30) days' advance notice to Company of cancellation. Contractor agrees to purchase all insurance required in this Article in keeping with the minimum requirements hereof from companies acceptable to Company and to furnish Company, upon request from time-to-time, with satisfactory evidence that such insurance is in conformity with the

minimum requirements thereof and when requested to do so, shall furnish Company with certified copies of all such insurance policies. Should Contractor at any time neglect or refuse to provide any insurance required herein, or should any insurance be cancelled, Company shall have the right to procure such insurance with the cost therefor deducted from any invoice amount payable to Contractor by Company.

705 Contractor agrees to comply with all laws and lawful regulations applicable to any activities carried out in the name of or representative of Exxon Shipping Company under the provisions of this agreement and/or amendments to it. Contractor agrees that all financial settlements, billings, and reports rendered to Exxon Shipping Company, as provided for in this agreement and/or any amendments to it will reflect properly the facts about all activities and transactions handled for the account of Exxon Shipping Company, which data may be relied upon as being complete and accurate in any further recording and reporting made by Exxon Shipping Company, for whatever purpose. Contractor agrees to notify Exxon Shipping Company promptly upon discovery of any instances where the Contractor fails to comply with provisions above.

706 In performing its obligations hereunder, Contractor shall comply with the Fair Labor Standards Act of 1938 and all other applicable laws and with all applicable orders, rules and regulations of constituted authority, and laws, orders, rules, and regulations relating to pollution, and Contractor shall indemnify Exxon from any lien that may arise out of, or result from, Contractor's violation of any such laws, order, rule or regulations.

During the performance of this agreement, and any and all supplements and amendments thereto, to the extent possible, Contractor agrees to comply with requirements of the Federal Government with respect to the maintenance of non-segregated facilities, equal employment opportunity, Veteran's Preference, Minority Businesses, and hiring of the handicapped.

707 Contractor shall exercise reasonable care and diligence to prevent any actions or conditions which could result in a conflict with Exxon's best interests. This obligation shall apply to the activities of the employees and agents of Contractor in their relations with the employees, and their families, of Exxon and of third parties arising from this Agreement and accomplishing work hereunder. Contractor's efforts shall include, but not be limited to, establishing precautions to prevent its employees or agents from making, receiving, providing, or offering substantial gifts, entertainments, payments, loans, or other considerations for the purpose of influencing individuals to act contrary to Exxon's best interests.

708 Contractor shall not assign its rights or obligations or any sums that may accrue to it hereunder without the written consent of Company first having been obtained. Subcontracting of any of the work shall not relieve Contractor of its responsibilities and obligations under this agreement.

709 THIS AGREEMENT SHALL BE GOVERNED BY AND CONSTRUED ACCORDING TO THE LAWS OF THE STATE OF TEXAS.

EXXON SHIPPING COMPANY

POST OFFICE BOX 1512 • HOUSTON, TEXAS 77251-1512 "EXXSHIP HOUSTON"

J. A. TOMPKINS
FLEET SERVICES MANAGER

RECEIVED

JAN 19 1990

ROBERT C. HUBBARD

January 17, 1990

Time and Material Agreement

Mr. R. C. Hubbard
Southwest Marine, Inc.
Foot of 20th Street
San Francisco, California 94120-7644

Dear Sir:

On September 20, 1989 we sent you a new Standard Time and Materials Vessel Repair Agreement for your review and consideration. To date we have not heard back from you. If you are interested in entering into an "Evergreen" contract with Exxon Shipping Company, please review the enclosed material and let us hear from you in the near future so that we might finalize a mutually acceptable agreement.

Very truly yours,



H. P. Leyendecker
Repair Coordinator

HPL:lc
Enclosure

1459k/1460k

NWMAR130966

EXXON SHIPPING COMPANY

POST OFFICE BOX 1512 • HOUSTON, TEXAS 77251-1512 "EXXSHIP HOUSTON"

J. A. TOMPKINS
FLEET SERVICES MANAGER

September 20, 1989

(Addressee)

Dear Sir:

We feel it is appropriate to update and execute a new repair contract with shipyards which, from time to time, perform voyage and/or emergency repairs to oceangoing vessels comprising the Exxon fleet. Accordingly, in order to cover such repairs, we are enclosing a copy of this Company's standard Time and Materials Vessel Repair Agreement for your review and consideration.

The principal provisions of the contract are derived from Exxon's Bid or "Lump Sum" Repair Agreement with which you are already familiar. Only changes necessary to convert the accepted Lump Sum form to a Time and Materials type contract have been made. As a result, we are hopeful you will find the enclosed Agreement equally acceptable in terms of it expressing fairly the conditions under which any turnaround or emergency repairs would be completed by (S/Y Name).

Our wish is to have an "Evergreen" contract in place which will be mutually beneficial to both parties. Experience shows that having rights and responsibilities formally pre-established clearly enhances a smoother and more secure, continuing business relationship.

In Exhibit "B" to the contract, which establishes the commercial terms, we have attempted to highlight what is normally included in such an attachment, viz. composite labor billing rates, ancillary service charges, and dry dock fees, in addition to setting forth what is direct versus overhead expense. The Exhibit, of course, should include any other terms deemed helpful in clarifying our understanding.

After your review of the contract, we will appreciate your thoughts and comments on it and suggestions as to how we might proceed toward finalizing this alternative type vessel repair coverage as soon as conveniently possible.

Very truly yours,

H. P. Leyendecker

PLH:mdg
34221/0515x

Enclosures

NWMAR130967

PRO FORMA
 TIME & MATERIALS
 VESSEL REPAIR AGREEMENT
 BETWEEN
 EXXON SHIPPING COMPANY
 AND

DATED _____ 1989

| | | |
|-----|---|--------|
| JAT | RECEIVED EXXON SHIPPING COMPANY FLEET SERVICES JUL 25 1989 HOUSTON, TEXAS | See Me |
| WGD | | Action |
| RMF | | File |
| IK | | Info |
| GAL | | |
| HPL | | |
| LC | | |

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MASTER SHIP REPAIR CONTRACT

This MASTER AGREEMENT is entered into as of the _____ day of _____, 1989, by and between EXXON SHIPPING COMPANY, with offices located at 800 Bell Street, Houston, Texas 77002-7426 (hereinafter "Exxon") and _____ (hereinafter "Contractor"), with offices located at _____.

W I T N E S S E T H : T H A T

In consideration of the mutual covenants herein contained, Exxon and Contractor hereby agree as follows:

I.

GENERAL SCOPE OF WORK

(1) Contractor will provide all labor, machinery, tools, working area and equipment necessary to undertake and effect certain repairs, renewals and betterments, which from time-to-time during the term of this Agreement, Exxon may request and Contractor may agree to provide on or for the vessels (hereinafter individually "Vessel" and collectively "Vessels") of Exxon's owned or demise chartered tanker fleet. Such agreed repairs for each Vessel will be those repairs listed (less any exceptions noted by Contractor) in the specifications or Vessel Voyage Repair Request (Form 735-0104) which Exxon shall provide to Contractor (all repairs, including specifications or Vessel Voyage Repair Requests provided by Exxon shall constitute the hereinafter referred to "Contract Work") prior to arrival of Exxon's Vessel at Contractor's yard. The Contract Work, may be altered, enlarged, reduced or otherwise modified by Exxon with the concurrence of Contractor, which

concurrence shall not be reasonably withheld, at any time prior to redelivery of the Vessel by Contractor to Exxon. All such changes in the Contract Work shall be fully documented in writing by the Contractor or Exxon and approved in writing by Exxon in the form set forth herein as Exhibit "A". If such change will affect the redelivery date of a Vessel (hereinafter "Redelivery Date"), Contractor shall note on such Exhibit A the agreed to Redelivery extension or reduction (in working days) for the change.

(2) For other than voyage (turnaround) or emergency repairs, Contractor will conduct detailed surveys of repairs and/or modifications in advance of the yard period in conjunction with Exxon's representative for the purpose of advance procurement of materials, planning, prefabrication and scheduling. For all Contract Work, schedules including overtime requirements, if any, are to be submitted to Exxon for review. Such schedules will indicate each item considered to be a controlling job and the time (in working days) to accomplish the work. Work schedules shall be modified and/or updated to reflect current changes in timing and Exxon shall be kept fully and currently advised of all such changes.

(3) Man-hour and material estimates shall be prepared by Contractor and submitted to Exxon when the Contract Work to be performed is determined. Such estimates will indicate as closely as possible the man-hours and materials required by the initial specifications but will not be binding upon the final costs for doing the work. A report of expended man-hours by labor craft or trade shall be provided daily to Exxon's representative. Such reports will contain the information necessary to relate all such man-hours and expended running time to previous estimates.

(4) All workmanship and materials are to be of the highest quality, and are to conform to the requirements and regulations of the American Bureau of Shipping classification society, the U.S. Coast Guard and other governmental

authorities that have jurisdiction. Contractor is obligated to inform Exxon of any modifications to the Contract Work required in order that this conformance be accomplished. Exxon, through its Representative, shall, as promptly as practical, approve all work and materials conforming to the requirements of this Agreement and shall, as promptly as practical, reject all work and materials not conforming thereto. Rejected workmanship shall be satisfactorily corrected and rejected material satisfactorily replaced with proper material without charge therefor.

Exxon's judgment with respect to workmanship and/or material inspected and rejected shall be binding and final. Nothing done or permitted to be done by or on behalf of Exxon under this paragraph shall be deemed to be construed as a waiver of objection or an admission that any materials or workmanship are of the standard required for due performance of this Agreement.

(5) In the event that any of the materials specified in the Contract Work are unprocurable, Contractor shall so apprise Exxon's Representative as to such condition, and with each specific appraisal, Contractor shall thereupon provide equivalently suitable material.

(6) Contract Work shall be promptly undertaken, performed and completed as quickly as possible to enable the Vessel to be restored to service with minimum delay. In the event that the Contract Work on any one Vessel is not completed within the time stipulated by Contractor and agreed to by Exxon, Contractor shall pay to Exxon (notwithstanding any other provision of this contract) as liquidated damages (not as a penalty) a per diem amount to be mutually agreed upon prior to the commencement of the Contract Work for each and every working day or fraction thereof in excess of the time the Contract Work is specified to be completed, or any Redelivery Date which may exist under any extension of time made pursuant to this Agreement, and the actual date upon which redelivery of the Vessel is made to Exxon. Said liquidated

damages shall be the exclusive remedy against Contractor delay of the Contract Work performed on any one Vessel. Any extra work required as a result of Contractor's negligence, default or poor/faulty workmanship shall be for Contractor's account. The amount of liquidated damages due hereunder shall not be limited by any other provision of this Agreement, nor shall such payment serve to reduce the amount which may be otherwise payable under any other provision of this Agreement, including, but not limited to, Article IV.

(7) Any structural parts specified to be renewed which can be restored to their original condition by fairing, et cetera, also any parts specified to be removed for fairing which can be faired in place to the satisfaction of the American Bureau of Shipping classification surveyors, U.S. Coast Guard, other governmental authorities having jurisdiction, and Exxon's Representative will be accepted; on the other hand, any parts found broken or which are broken in removal of fairing, as result of the Contractor's negligence, are to be renewed by the Contractor at its own expense.

(8) In the event that any of the Vessel's machinery, equipment or fittings are used by Contractor or Contractor's agents, representatives of subcontractors, for any purpose whatsoever, Contractor agrees to restore or replace same as necessary to return these items to Exxon in the same condition they were in prior to such use.

(9) Contractor will notify Exxon in writing if there is or will be any appreciable scrap and salvage material resulting from the performance of the Contract Work. Unless Contractor is otherwise notified by Exxon in writing to the contrary, any such applicable scrap and salvage material shall be the property of Exxon and Exxon shall advise Contractor as to the disposition of same. Exxon, however, is under no obligation to accept such materials. Any proceeds from the sale of said scrap and salvage material by Contractor shall be credited to Exxon's account.

(10) Should Contractor require the removal or shift of engines, auxiliary machinery or any other part of the Vessel, including its fittings, equipment, stores, fuel, water ballast, etc., or should it become necessary for Contractor to remove the Vessel from Contractor's yard, all for the purpose of performing the Contract Work, the same shall be done at the sole risk of Contractor. Any damage or loss resulting from any such activity as well as the costs and consequences of such removal and restoration shall be the responsibility of Contractor.

(11) After a Vessel has been delivered to Contractor's yard, Contractor shall be responsible for telephone service, wharfage, daily garbage removal, towage, dockage, running and tending lines as well as for providing services necessary for the completion of the Contract Work such as water for testing and refilling tanks. If Contractor requires that the plant be totally or partially shut down, Contractor shall supply steam and/or electrical power as required to maintain services aboard Vessel (e.g., heating, lighting, cooling, sanitary service, etc.), protect Vessel from harmful consequences (e.g., freezing damage), and assist, if requested by Exxon, the start up of the plant when Contract Work is concluded. Upon completion of the Contract Work, Contractor shall, if requested, fill all of Vessel's potable and fresh water tanks with portable water. All such services described above shall be paid for by Exxon in accordance with the provisions stipulated in Article II, paragraph (1)(d) of this Agreement.

(12) Charges for air freight and specialized equipment to be used by Contractor in performing the Contract Work hereunder shall be approved by Exxon prior to ordering.

II.

PAYMENT TO CONTRACTOR

(1) As consideration for the Contract Work provided under this Agreement, Exxon shall pay Contractor for the man-hours, materials, services,

parts, dry docking and equipment at rates set forth in Exhibit "B", which is attached hereto and made a part hereof. The rates stipulated in Exhibit "B" include all of Contractor's overhead, profit and all other amounts payable to Contractor hereunder.

(a) Hourly labor rates shall be as agreed upon in current Exhibit "B", or as stipulated in superseding amendments thereto, prior to Contractor's agreement to undertake to provide the Contract Work for the Vessel:

- (i) for each straight time man-hour on Monday through Friday, and
- (ii) for each man-hour in excess of eight (8) hours on Monday through Friday and for each man-hour on Saturday, and
- (iii) for each man-hour on Sunday and holidays.

Hourly labor rates shall apply to each Contract Work related man-hour of each employee of Contractor in the department also listed in Exhibit "B" to this Contract.

(b) The items and services purchased (including, but not limited to, material, freight and subcontracts), shall be at net cost to Contractor, plus ten percent (10%) of such net cost. The cost of items issued from Contractor's materials inventory shall be based on the rolling average invoice net cost of Contractor's prior paid invoice and current paid invoice of such inventory items. Net cost is defined as cost paid by Contractor or its subcontractors and includes all cash, trade and volume discounts and applicable freight allowance or equalizations.

- (c) Contractor shall charge an agreed rate not to exceed its published, prevailing rates in effect at the time the Contract Work is performed for (i) dry docking, and (ii) tug service associated with bringing the Vessel in and out of the dry docking facilities and when any Contract Work related shifting of the Vessel within Contractor's yard is made.
- (d) Services (including, but not limited to telephone service wharfage, garbage removal, water, steam and electrical power) shall be billed at agreed rates not to exceed Contractor's prevailing, published rates in effect at the time such were rendered to Exxon.

(2) In the event the Contract Work on a Vessel is scheduled to be completed within two (2) calendar weeks or less after delivery of the Vessel to Contractor, then the Contractor shall submit an itemized invoice, as stipulated hereinafter, to Exxon after completion of all the Contract Work. Such invoice shall be payable in full by Exxon to Contractor within thirty (30) calendar days after Exxon's receipt thereof. In the event the Contract Work for a Vessel is scheduled to be completed in more than two (2) calendar weeks after delivery of the Vessel to Contractor, then Contractor, at its option, may submit a progress payment invoice, based on expenditures to date, at the end of each calendar week, commencing at the end of the second calendar week from the time Contractor started to perform the Contract Work, for the man-hours and services performed and for the materials, parts, dry docking and equipment furnished and installed on the Vessel for the period covered by such invoice (which shall be at least two weeks prior to submittal of such invoice). The full amount of each such weekly billing, which will be in the amount of 85% of expenditures and costs to date, shall be due and payable by Exxon to Contractor within thirty (30) calendar days after Exxon's receipt of Contractor's invoice therefor.

(3) Contractor shall submit invoices and its final invoice to Exxon at P. O. Box 1512, Houston, Texas 77002-7426, Attention: Fleet Services, in an original invoice plus three (3) copies and in a recapitulation format as stipulated in Appendix "A" attached hereto. Contractor further agrees that it will support such invoices covering the Contract Work with one (1) set of the following detailed data submitted to Exxon in a manner similar to that as prescribed in Appendix "B" attached hereto, and all such data shall be neatly and orderly compiled and easily traceable to the recapitulation totals on the invoice:

- (a) Direct Labor charges: Shall be supported either by computerized report with sub-totals for each repair item, or by manual listing with adding machine tape documenting sub-totals.
- (b) Materials
 - (i) Stock materials: Shall be supported either by computerized report with sub-totals for each repair item, or by manual listing with adding machine tape.
 - (ii) Outside direct purchase materials and services: Shall be supported by copies of all vendors' invoices as soon as they are received by the Contractor and adding machine tape documenting sub-totals.
- (c) Contractor shall also submit to Exxon priced-out itemized descriptive recapitulation as illustrated in Appendix "C" attached hereto.

(4) Contractor shall obtain prior approval from Exxon before incurring inordinate amounts of overtime in the performance of the Contract Work hereunder and shall make all reasonable efforts consistent with the proper and expeditious completion of such Contract Work to minimize costs. Contractor

shall list all items of the Contract Work requiring overtime and the estimated overtime hours related to the specified Contract Work item.

(5) When requested in advance by Exxon, each day Contractor shall furnish to Exxon's representative who authorizes the Contract Work to be performed hereunder, or to such other designated persons, a copy of Contractor's daily time reports applicable to the Contract Work performed by Contractor as soon as they are available. Such report shall include the name of each of Contractor's employees engaged in the Contract Work hereunder, their occupational classifications, and the number of hours each such employee worked that day on the Contract Work. Exxon and its duly authorized representatives shall have the right to check the number of persons employed on such Contract Work, their occupational classifications and the time they are engaged performing the Contract Work and to check all equipment used on the Contract Work by Contractor and the length of time it is used in the performance of the work.

(6) Exxon or its duly authorized representatives shall have access, at all reasonable times, to all Contractor's personnel, job descriptions, employment and qualification records, books, records, correspondence, instructions, plans, drawings, receipts, vouchers, data stored in computers and memoranda of every description pertaining to Contract Work under this Agreement for the purpose of auditing and verifying costs of Contract Work or for any other reasonable purpose. Exxon's representatives shall have the right to reproduce any of the aforesaid documents. Contractor shall preserve all the aforesaid documents for a period of three (3) years after completion and acceptance or termination of the Contract Work. Contractor agrees that in any contracts with its subcontractors it shall use its best efforts to include a provision similar to the foregoing so that Exxon shall have access to applicable records of such subcontractors for the above purposes.

WARRANTY AND LIENS

(1) Contractor warrants that its workmanship shall conform to the highest standards of the trade and according to the rules of the American Bureau of Shipping, the U.S. Coast Guard and any other governmental authorities having jurisdiction, regulatory agencies and to specifications and undertakings otherwise contained in this Agreement. Contractor warrants and guarantees all Contract Work, workmanship and materials against original defects and against failure under ordinary usage, exclusive of ordinary wear and tear, for 90 calendar days from the date of redelivery of the Vessel to Exxon, and under such guarantee Contractor agrees to repair or replace defective work and materials and any immediate damage to the Vessel resulting therefrom at no expense to Exxon. If such repair or replacement cannot be conveniently made or be timely made at Contractor's shipyard, Contractor shall forthwith pay to Exxon the actual cost of supplying the materials and doing the Contract Work at straight time rates at a shipyard designated by Exxon and consented to by Contractor (which consent shall not be unreasonably withheld) and the payment of such sum shall completely discharge Contractor only from its obligation to replace the defective parts or to remedy the defective workmanship. Contractor and Exxon shall exert their best efforts to minimize the cost of all such repairs or replacements. Contractor shall also secure the extension to Exxon of all manufacturers' warranties existing on machinery and equipment installed hereunder. The foregoing period of ninety (90) calendar days shall be extended by a day for each day for which the Vessel cannot be operated as the direct consequence of a warranty deficiency and any immediate damage resulting therefrom.

(2) Exxon may require Contractor to furnish a list of all fabricators, materialmen, subcontractors, and workmen involved in the Contract Work,

28711
together with evidence satisfactory to Exxon of payment of all amounts for wages, materials furnished and other indebtedness of Contractor and its subcontractors in connection with that portion of the Contract Work covered by any invoice. If, at any time, there should be evidence of any actual or threatened lien or claim for which Exxon or its property might become subject or liable and which is chargeable to Contractor, Exxon may retain out of any payment to Contractor then due or thereafter to become due an amount sufficient to completely indemnify Exxon against such lien or claim until such time as Contractor shall deliver to Exxon a complete release or receipt satisfactory to Exxon discharging such lien or claim. Exxon may, at any time, pay and discharge such lien or claim and deduct the amount so paid, together with costs and attorneys' fees, from any payment then due or thereafter to become due to Contractor. If any lien or claim remains unsatisfied after final payment has been made, Contractor shall refund to Exxon the entire sum that Exxon may be compelled to pay in protecting its interest or in discharging such lien or claim, together with all costs and attorneys' fees.

IV.

INDEPENDENT CONTRACTOR, INDEMNITY AND LIABILITY PROVISIONS

(1) All Contract Work done by Contractor shall be required to meet the approval of Exxon's Representative, but the detailed manner and method of doing the Contract Work shall be under the control of Contractor. It is understood that Contractor is an independent contractor as to all Contract Work performed hereunder. Without altering or impairing the independent contractor relationship and except as provided in paragraph 2 of this Article IV of this Agreement, Contractor agrees to protect, indemnify and hold Exxon harmless from and against any and all claims, demands and causes of action of every kind and character, including without limitation, claims by Contractor's and its subcontractors' employees and Exxon's employees, based upon personal

injury, death or loss of damages to property arising of or related to the Contract Work performed hereunder or equipment utilized in connection therewith, resulting, in whole or in part, from the negligent acts or omissions of Contractor or its subcontractors, provided that if such claim, demand or cause of action is due to the joint or concurrent negligence of Contractor, its subcontractors, Exxon or any other party, Contractor's responsibilities hereunder shall be in the same proportion that the negligent acts or omissions of Contractor and its subcontractors contributed thereto. Contractor shall be responsible for and shall hold Exxon harmless for all damage and loss sustained to Contractor's or its subcontractors' tools and equipment utilized in the performance of all Contract Work hereunder and for any consequential, special or indirect damages, or loss of anticipated profits sustained by Contractor or its subcontractors, even if such loss or damage results from the negligence of Exxon.

(2) Contractor shall compensate Exxon for loss of or damage to the Vessel, or any consequences thereof, which results from the negligence or willful misconduct of Contractor or its subcontractors in the performance of the Contract Work. Where such loss or damage is the result of the joint negligence or willful misconduct of Contractor and/or its subcontractors with any other party including Exxon, Contractor's duty to compensate Exxon shall be in proportion to Contractor's and its subcontractors' allocable share of such joint negligence or misconduct.

Contractor's duty to compensate Exxon for loss of or damage to the Vessel, or any consequences thereof, shall be limited to the greater of:
1) \$1,000,000 or 2) the amount recoverable by Contractor or its subcontractors under the valid and collectible insurance carried by Contractor and its subcontractors, or the amount which would have been recoverable under such insurance if all conditions, requirements, and warranties imposed on the

insured by the insurer a being or had been met. This limitation on contractual liability for loss or damages to the Vessel shall in no way limit or otherwise exclude the payment of liquidated damages in any amount which may be due and payable under Article V, paragraph 3 of this Agreement.

V.

DELIVERY, LIQUIDATED DAMAGES AND FORCE MAJEURE

(1) In view of the loss of revenue to Exxon resulting from the inactivity of the Vessel during the course of the Contract Work, it is acknowledged and agreed that time is of the essence in the performance of the Contract Work and this Agreement.

(2) Contractor's time and responsibility for the Vessel shall commence when the Vessel is delivered on the day scheduled to Contractor's yard or pier in a clean, gas-free condition (unless mutually agreed that Contractor will remove slops and gas-free the Vessel) and otherwise suitable condition for the immediate commencement of the Contract Work, at which time the Contractor does certify and represent that the Vessel can always be safely afloat and shall cease when the Contract Work has been completed to the satisfaction of Exxon, or terminated by Exxon, and the Vessel has been redelivered to and accepted by Exxon. Contractor is obliged to remove all of its equipment and tools from the Vessel as well as to remove all rubbish and debris from tanks, holds and other working areas prior to redelivery; the Contract Work not being completed until these things have been accomplished.

(3) Contractor shall complete the Contract Work to the satisfaction of Exxon and redeliver the Vessel within an agreed to specified number of consecutive calendar days from the actual date of delivery of Vessel to Contractor when it is certified safe and gas free. If the Contract Work is not completed and the Vessel redelivered to and accepted by Exxon within the agreed to specified time or as amended pursuant to Article I, notwithstanding

any other provision of this Agreement, an agreed to per centum (or pro rata thereof) dollar value of the Vessel shall be deducted from the final job cost as agreed liquidated damages for the delay (and not as penalty), for each and every calendar day or fraction thereof elapsing between the specified completion and redelivery date until the date when the Vessel is actually completed, redelivered and accepted.

(4) The Redelivery Date may be extended in the manner and pursuant to procedures described in paragraph 5 of this Article V by reason of an event of Force Majeure as herein defined. Force Majeure as employed in this Agreement shall be deemed to mean all causes resulting in delay which are beyond the control of Contractor and which are not in any way caused by the willful act, fault or neglect of the Contractor and shall include, but not be limited to, (i) Acts of God (except inclement weather or storm of the ordinary seasonable nature); (ii) earthquakes, hurricanes, lightning or floods; (iii) war between the United States of America and any foreign country; (iv) expropriation or intervention of civil or military authorities or other departments, agencies or instrumentalities of government; (v) government priorities; (vi) strikes or slowdowns (excluding lockouts and insufficient quantity and quality of any labor forces); (vii) explosions, fires or vandalism; (viii) riots, insurrections, sabotage, blockades, embargoes, or epidemics; and (ix) non-delivery of materials and equipment to be furnished by Exxon.

(5) In the event that the performance of the Contract Work by Contractor shall be delayed, hindered or prevented by reason of Force Majeure, the Contractor shall immediately notify Exxon by TWX, confirmed by letter, of the existence of said Force Majeure event within 24 hours from the date of the commencement of said delay, hindrance or prevention. The confirming letter shall include Contractor's estimate of the probable overall effect thereof on the Redelivery Date. Failure to send such timely notice shall be deemed to be

a waiver by Contractor of the right to assert that Force Majeure excused such delay, hindrance or prevention. Contractor shall exercise due diligence to prevent, eliminate or overcome such cause and to resume performance.

Within 24 hours after the delay, hindrance or prevention ends, Contractor shall give Exxon notice by TWX of the date it ended and the probable extension of the Redelivery Date, if any, caused by such delay, hindrance or prevention, and within an additional 24 hours thereafter, Contractor shall notify Exxon of the extension of the Redelivery Date, if any, to which Contractor claims to be entitled as a result of Force Majeure. If within 24 hours after the receipt of that notice Exxon shall not have objected to such extension, it will be deemed to have consented thereto. No extension shall be due to Contractor unless:

- (i) Contractor has duly given the notices and statements hereinabove required, and
- (ii) the delay has not in any way been caused or contributed to by any willful act, fault or neglect of Contractor, and
- (iii) Contractor has since the occurrence of the contingency taken all reasonable steps open to it to mitigate the effect of the contingency upon the Redelivery Date.

And in the event of any dispute between the parties the burden shall be on Contractor to establish:

- (i) the facts entitling it to rely on this clause, and
- (ii) that the requirements (i), (ii), and (iii) above are satisfied.

(6) It is further understood and agreed that if the Contractor should complete the Contract Work and redeliver the Vessel before the time required herein, Exxon shall not be liable to Contractor for any premium or special bonus payment.

INSURANCE

1. Contractor shall carry and maintain in force the following insurances with companies satisfactory to Exxon.

(a) Workers' Compensation and Employers' Liability

For all its employees engaged in performing Contract Work hereunder, workers' compensation insurance, including the U.S. Longshoremen's and Harbor Workers' Compensation Act endorsement, and employers' liability insurance or similar social insurance in accordance with Law which may be applicable to said employees.

(b) Comprehensive General Liability

Its normal and customary comprehensive general liability insurance coverage, including ship repairers' legal liability, and policy limits of at least \$1,000,000 coverage, whichever is larger, for injury, death or property damage resulting from each occurrence.

(c) Automobile Liability

Automobile liability insurance coverage and policy limits covering owned, non-owned and rented automotive equipment providing at least \$1,000,000 coverage for injury, death, or property damage resulting from each occurrence.

Nothing contained herein shall limit or waive Contractor's legal or contractual responsibilities to Exxon or others.

(2) Upon request, Contractor shall have its insurance carrier(s) furnish to Exxon certified copies of their insurance policies and/or insurance certificates specifying that no insurance will be cancelled or materially changed while Contract Work is in progress without thirty (30) calendar days' prior written notice to Exxon.

(3) If Contractor subcontracts any part of the Contract Work, Contractor shall require its subcontractors to maintain insurance specified in the

subcontracts, but shall not require subcontractors to carry insurance which would duplicate the coverage of the insurance carried by Contractor. If requested by Exxon, Contractor shall have its subcontractors furnish the same evidence of insurance required of Contractor.

(4) Contractor and its subcontractors shall not commence the Contract Work unless all of the insurance required of Contractor and its subcontractors are in force and the necessary certificates and statements, if requested by Exxon, have been witnessed by Exxon.

VII.

REPRESENTATIVES

(1) Exxon's representative for the purpose of inspecting and administering this Agreement on behalf of Exxon shall be the Fleet Services Manager or any other person that Exxon may designate from time-to-time by notice in writing or by telex.

(2) In order to permit inspection of the Contract Work, at no expense to Exxon, Exxon and Exxon's Representative shall have reasonable access during working hours to Contractor's yard and to its workshops where the Contract Work is being completed by Contractor. All inspections, tests and approvals shall be performed in such a manner as not to delay the Contract Work unnecessarily.

VIII.

TAXES

(1) Contractor shall pay all taxes, levied or assessed against Contractor or its property, or imposed on Contractor, or required to enable the Contractor to engage in the business of performing the Contract Work, including without limitation income and franchise taxes, personal property taxes, licenses and fees including import and/or export licenses and fees. Any applicable state and local sales taxes shall be collected by Contractor, but Contractor shall not collect sales taxes from Exxon on property or

services for which Exxon furnishes Contractor a properly completed exemption certificate.

Contractor shall be responsible for, and shall pay at its own expense when due and payable, all employment taxes and contributions imposed by law, regulations, or trade union contracts, with respect to, or measured by the compensation paid to, employees of Contractor, including without limitation, taxes and contributions for unemployment compensation insurance, old age benefits, welfare funds, pensions and annuities, health insurance and worker's compensation insurance. If, for any reason, Exxon is required to pay any such taxes or contributions imposed with respect to, or measured by the compensation paid to, individuals treated as employees or subcontractors of Contractor by Exxon and Contractor, Contractor agrees to reimburse Exxon on demand at Houston, Texas, for all such taxes or contributions; or at its election, Exxon is authorized to deduct all sums so paid for such taxes and contributions from such amounts as may be or become due or owing to Contractor hereunder.

IX.

HEALTH AND SAFETY AND ASBESTOS HANDLING

(1) Contractor shall provide a safe place to work for its employees and hereby agrees that, prior to commencement of the Contract Work, Contractor will inspect Exxon's Vessel and ascertain whether any health or safety hazards exist which would require the use of personal protective equipment or specific operating practices in order to provide Contractor's employees with a safe place to work. Exxon will make available to Contractor, Material Safety Data Sheets (MSDS) in Exxon's possession on known toxic or hazardous substances carried as cargo on any vessel presented to Contractor for repair or alteration to which Contractor's employees are likely to be exposed while performing work. Contractor shall notify its employees of all health and

safety hazards to which Contractor's employees shall be exposed and shall supply its employees with all necessary personal protective equipment and enforce such operating practices as are necessary to provide a safe place to work. Should Contractor encounter conditions on or in the Vessel that indicate its employees are potentially exposed to unsafe conditions, hazardous substances or materials, Contractor will immediately bring this fact to the attention of Exxon and shall supply Contractor's employees with all necessary personal protective equipment and enforce such operating practices as are necessary to provide a safe place to work. Contractor shall furnish its employees, at all times, with any necessary protective clothing and equipment to avoid any harmful exposure while on or in the Vessel.

(2) Where work is to be performed on asbestos or existing asbestos is to be removed, Contractor shall take the following precautions: All work under this Agreement shall be in strict accordance with the most recent edition of all applicable national, state, and local regulations, standards, and codes governing asbestos abatement in addition to Exxon's standards, which are available on board Exxon's Vessel. Where conflict may exist between governmental regulations and Exxon's standards, the most stringent requirements shall be followed. Contractor shall review and follow the procedures and guidelines set forth in existing governmental regulations and Exxon's standards pertaining to asbestos. In addition, it is the obligation and responsibility of the Contractor to ensure that its employees and/or the employees of any and all subcontractors involved with asbestos related work conditions shall be adequately trained in asbestos handling precautions and in the use of personal protective equipment and be fully informed about the consequences of exposure to asbestos and that they perform all work in accordance with the aforementioned regulations and/or standards. Any delay to the Contract Work caused by Contractor's failure to comply with the

requirements of this provision shall not be considered a force majeure event and shall not entitle Contractor to any extension of the Agreement Redelivery Date.

X.

AGREEMENT TERM AND JOB TERMINATION

(1) The term of this Agreement shall be for a period of one (1) year from the date first written above and from year-to-year thereafter, provided, however, that either party may terminate this Agreement at any time during the term hereof by written notice to the other party thirty (30) calendar days prior to stating the specified date of termination.

(2) Contract Work in progress at the time of termination notice shall not be affected thereby but shall be completed under the terms and conditions of this Agreement, and Exxon shall pay Contractor therefor in accordance with provisions stipulated in Article II hereof.

(3) If Contractor should fail at any time to provide the necessary materials, labor, tools, equipment, utilities, and supervision for the proper performance of the Contract Work, or should otherwise breach this Agreement in whole or in part, or fail to use due diligence in the performance thereof, or should Contractor become insolvent, or should insolvency, receivership or bankruptcy proceedings be commenced by or against Contractor, or should Contractor make an assignment for the benefit of creditors, then Exxon may, but is under no obligation to, in addition to all other remedies available at law or in equity, terminate this Agreement and take over the Contract Work and perform same through Exxon's employees or another contractor to complete all or any part of the Contract Work then remaining unperformed after giving to Contractor written notice of Exxon's election so to do. If Exxon should exercise such right, Contractor will receive no further payments until the Contract Work has been completed.

(4) Exxon shall have the right, at any time for any reason, to terminate a job in progress by giving at least ____ hours notice in writing or by telex to Contractor, who shall then be entitled to full payment for the part of the Contract Work done in accordance with this Agreement up to the time of such job termination. Exxon shall not be held liable for any damages, including those for anticipated profits, because of such termination. Should a job be terminated before the completion of the Contract Work for any cause whatsoever, Contractor shall promptly redeliver Vessel to Exxon and remove Contractor's equipment and supplies from the Vessel.

XI.

WORK BY EXXON

Exxon shall have the right from time-to-time during the performance of the Contract Work by Contractor hereunder to perform various tasks around the Vessel. In the event Exxon exercises this right, Exxon agrees to protect, indemnify and hold Contractor harmless from and against any and all claims, demands and causes of action of every kind and character, including without limitation, claims by Exxon employees and employees of Contractor and its subcontractors, based upon personal injury, death or loss of or damages to property arising out of or related to the Contract Work performed hereunder or equipment utilized in connection therewith, resulting, in whole or in part, from the negligent acts or omissions of Exxon, provided that if such claim, demand or cause of action is due to the joint or concurrent negligence of Exxon, Exxon's responsibilities hereunder shall be in the same proportion that the negligent acts or omissions of Exxon contributed thereto.

XII.

NON-EXCLUSIVE AGREEMENT

Nothing in this Agreement shall be construed to grant Contractor the exclusive right to repair all Vessels in Exxon's fleet. It is understood that

Exxon retains the right to contract with any third party any work Contractor is not requested to provide or, if requested, does not agree to provide.

XIII.

ASSIGNABILITY

Contractor shall not assign its right or obligations or any sums that may accrue to it hereunder without the written consent of Exxon first having been obtained. Contractor shall not subcontract any part of the Contract Work without the prior written consent of Exxon, which consent shall not be unreasonably withheld. Subcontracting of any of the Contract Work shall not relieve Contractor of its responsibilities and obligations under this Agreement.

XIV.

INTERPRETATION, APPLICABLE LAW

(1) THE VALIDITY AND INTERPRETATION OF THIS AGREEMENT AND THE LEGAL RELATION OF THE PARTIES THERETO SHALL BE GOVERNED BY THE LAWS OF THE STATE OF TEXAS, U.S.A. AND THE GENERAL MARITIME LAW OF THE U.S.A.

(2) No change in this Agreement or waiver of any provisions thereof shall be binding unless it be in writing and signed by both parties or by exchanges of cables or telexes, confirmed by writing, specifically stating that same is an amendment to this Agreement.

(3) The headings of Articles are for convenience of reference only and shall not affect the interpretation of this Agreement.

(4) Invalidity of any one or more provisions, or portion thereof, of this Agreement, in general or in application to any party or circumstance, shall not affect or impair the remaining provisions or portions thereof or application to other parties or circumstances. In the event there are any

conflicts between any of the provisions of this Agreement and any other document of agreement between Exxon and Contractor relating to the Contract Work, the provisions hereof shall be controlling.

(5) This Agreement shall be subject to the obtainment of any necessary licenses, permits or other Government approvals of the Country (or any political subdivision thereof) in which the Contract Work will be performed and Contractor warrants that it will ensure that, at its sole expense, any such licenses, permits or other approvals are duly obtained.

XV.

COMPLIANCE WITH LAW

Contractor shall comply and secure compliance by subcontractors with all applicable laws, ordinances, requirements or regulations of any municipal, local or any other governmental authorities or agency. Contractor shall defend, indemnify and hold Exxon harmless from all liability for all such claims, suits and proceedings brought against Exxon and liability imposed on Exxon by reason of any violation or alleged violation of law by Contractor or its subcontractors.

XVI.

BUSINESS ETHICS

(1) Contractor agrees to comply with all laws and lawful regulations applicable to any activities carried out in the name of or on behalf of Exxon under the provisions of this Agreement and/or any amendments to it.

(2) Contractor agrees that all financial settlements, billings, and reports rendered to Exxon as provided for in this Agreement and/or any amendments to it, will, to the best of its knowledge and belief, reflect properly the facts about all activities and transactions handled for the account of Exxon, which data may be relied upon as being complete and accurate in any further recording and reporting made by Exxon for whatever purpose.

(3) Contractor agrees to notify Exxon promptly upon discovery of any instance where Contractor fails to comply with provisions above or where Contractor has reason to believe that data supplied above is no longer accurate and complete.

XVII.

EQUAL OPPORTUNITY

It is understood by both parties to this Agreement that Contractor is an Equal Opportunity Employer and that in the performance of this Agreement, Contractor shall not engage in any conduct or practice which violates any applicable law, order, or regulation prohibiting discrimination against any person by reason of race, color, religion, national origin, sex or age, or on account of being handicapped, a disabled veteran, or a veteran of the Vietnam Era.

XVIII.

CONFLICT OF INTEREST

Contractor shall exercise reasonable care and diligence to prevent any actions or conditions which could result in a conflict with Exxon's best interests. This obligation shall apply to the activities of the employees and agents of Contractor in their relations with the employees, and their families, of Exxon and of third parties arising from this Agreement and accomplishing work hereunder. Contractor's efforts shall include, but not be limited to, establishing precautions to prevent its employees or agents from making, receiving, providing, or offering gifts, entertainments, payments, loans, or other considerations for the purpose of influencing individuals to act contrary to Exxon's best interests.

XIX.

NOTICES

All notices hereunder shall be in writing and shall be delivered personally or by certified mail, postage prepaid, to the parties hereto at the

following respective addressees, unless changed by written notices. All said notices shall be deemed to have been received when properly posted.

To Contractor:

To Exxon: Exxon Shipping Company
800 Bell Street
Houston, Texas 77002-7426 U.S.A.
XX.

ARBITRATION

(1) Any controversy or claim arising out of or relating to this Agreement or the breach thereof, shall be settled by arbitration in the City of Houston, Texas, United States of America, pursuant to the laws relating to arbitration there in force, before a board of three persons, consisting of one arbitrator to be appointed by Exxon, one by Contractor and one by the two so chosen. The arbitrators may grant any relief and render any award, which they, or the majority of them, deem just and equitable and within the scope of the agreement of the parties, including, but not limited to, specific performance. Awards pursuant to this Article may include costs, including a reasonable allowance for attorneys' fees, and judgments may be entered upon any award made hereunder in any Court having jurisdiction in the premises.

(2) In the event of reference to arbitration of any dispute arising out of matters occurring prior to completion of the Contract Work as defined in the Agreement, Contractor shall not interrupt the Contract Work, but the arbitration award shall include a finding, if appropriate, as to the extent, if any, to which the stipulated completion time should be adjusted.

XXI.

WAIVER

No waiver by either party of any breach of any of the covenants or conditions herein contained to be performed by the other party shall be

construed as a waiver of any succeeding breach of the same or any other covenant or condition.

XXII.

ENTIRE AGREEMENT

This writing is intended by the parties to be the final, complete and exclusive statement of their Agreement about the matters covered herein. THERE ARE NO ORAL UNDERSTANDINGS, REPRESENTATIONS OR WARRANTIES AFFECTING IT.

EXECUTED on the date first above written in duplicate originals.

WITNESS:

EXXON SHIPPING COMPANY

BY

Name:

Title:

WITNESS:

Contractor

Name:

Title:

EXHIBIT A

(Attached to and made a part of Agreement)

SPECIFICATION CHANGE PROCEDURE

I. General

Without invalidating the Contract, Exxon may make changes to the Specifications (and drawings) hereto at any time during the performance of the work hereunder upon agreement with the Contractor.

All significant changes, which include additions, deletions, or modifications, to the type or quantity of work performed pursuant to the Contract must be authorized in accordance with this Exhibit.

Contractor shall agree to accomplish additional work unless precluded by Contractor's prior commitments. All changes to the Specifications will be carried out in accordance with all the provisions of the Contract.

Prior to signing a Change Directive, Contractor shall indicate thereon, if and to what extent the requested change shall affect the Redelivery of the vessel.

II. Initiating the Change Request

- A. Exxon's Authorized Representative shall initiate all changes to the Specifications (and drawings) and request estimates for such changes by completing the Specification Change Directive provided by Exxon. By signing this Change Directive, Contractor acknowledges receipt of Change Request and its agreement to complete the work described thereon.
- B. Exxon's Authorized Representative may issue verbal authorization to proceed with a change only when necessary. Any such verbal authorization shall be followed promptly by completion of the written procedures described in II "A" above.
- C. Exxon's Specification Change Directive form is attached herewith.

728-0040

SHIPYARD FIELD ORDER/ADDITIONAL WORK

| | | |
|------------------------|--|-------------|
| VESSEL EXXON | FIELD ORDER NO. | DATE |
| SHIPYARD | | JOB NO. |
| ITEM NO. | <input type="checkbox"/> NEW <input type="checkbox"/> ADDITIONAL | TO ITEM NO. |

FURNISH THE NECESSARY LABOR, EQUIPMENT AND MATERIAL TO ACCOMPLISH THE FOLLOWING:

| |
|--|
| |
| |
| |
| |
| |
| |

| | |
|---|---|
| SIGNATURE/REPAIR SUPERINTENDENT | EXXON SHIPPING COMPANY P. O. BOX 1512 HOUSTON, TEXAS 77001 ATTN: |
| SHIPYARD TO FURNISH COST ESTIMATE WITHIN TWO (2) DAYS OF ISSUING THIS FIELD ORDER. | |

WHITE — SHIPYARD

EXHIBIT "B" TO AGREEMENT BETWEEN EXXON SHIPPING COMPANY, AND _____

(1) As full consideration for the Contract Work performed under the Agreement, Exxon agrees to pay Contractor therefor the following labor rates for all labor relative to performance of the Contract Work hereunder, which includes all overhead, profit and all other amounts payable to Contractor hereunder, except as hereinafter set forth under this Exhibit "B":

| <u>Classification</u> | <u>Straight Time</u> | <u>Overtime</u> | |
|-----------------------|----------------------|--|---------------------------------------|
| | | <u>Saturdays & Weekdays in Excess of 8-hours</u> | <u>Sundays & Holidays</u> |

The above rates shall be effective from _____ through _____ .

(2) It is understood between Exxon and the Contractor that the number of labor hours as billed pursuant to the terms of the Contract will not be diminished or reduced by any factors of "efficiency," provided that Exxon's representative shall have the right to place Contractor on notice in writing immediately upon the occurrence of any inefficiency which Exxon wishes to use as a basis of a claim to reduce the contract cost. If immediate notice of inefficiency is not given to Contractor, then all claims to reduce the contract cost based on inefficiency shall be barred. In cases where Exxon has properly exercised such right to dispute the number of Contractor's labor hours charged to repair item (or for any other "efficiency" related reason), the parties shall resolve the matter following Exxon's notice as soon thereafter as possible to the mutual satisfaction of both parties.

(3) Straight Time Work Day and Shift Hours:

| | | | | | | | |
|--------------|--------------------------|------|-----|------|-----|-----|--------|
| First Shift | : | From | ___ | AM | to | ___ | PM |
| Second Shift | : | From | ___ | PM | to | ___ | |
| Third Shift | If requested by Customer | | | | | | |
| | and labor available | | : | From | ___ | to | ___ AM |

Overtime rates shall apply for any Contract Work performed by Contractor's employees either before or after their normal shift hours. Overtime rates shall also apply for any Contract Work performed on weekends and holidays. The weekend shall be deemed to commence at ___ AM Saturday and end ___ AM Monday morning. The following days shall be considered holidays:

New Year's Day (1/1); Good Friday; Independence Day (7/4); Labor Day; Thanksgiving Day; Christmas Day (12/25). Holidays which fall on Saturday or Sunday will be observed and paid that day, except that holidays falling on a Saturday or Sunday which are observed nationally on the following Monday, then that holiday shall be observed and paid accordingly.

(4) Revision of Labor Rates: Any change to the above rates shall not be made unless Contractor notifies Exxon in writing thirty (30) days prior to the effective date of such change. The above labor rates will remain in effect until such time as they may have to be revised to reflect labor costs as per Contractor's Union Agreement. The new rates will be subject to negotiations between Exxon and Contractor. It is further understood and agreed that premium rates shall not be paid by Exxon unless Contractor has paid premium rate to said Contractor's employee.

(5) Dry docking rates: Contractor will apply the following dry dock rates to the vessel as follows:

- (a) Haul: _____ per gross ton
- (b) Lay Day: _____ per gross ton

It is agreed that dry dock lay day time shall commence 24 hours after the haul day. And no lay day charges shall be billable to Exxon on weekends or any other time when Contractor does not perform dry dock related work authorized by Exxon while vessel is in dry dock.

- (6) Materials - Charges for all materials will be at cost plus a handling allowance of 10% for materials. As related to materials, "cost" is defined as net cost paid by Contractor or its subcontractors and include all cash, trade and volume discounts and any applicable freight allowance or equalizations.
- (7) Subcontractor Services: Charges for subcontractor service shall be at net cost plus mark-up of 10%. In cases where subcontractor labor is engaged by Contractor to supplement and/or perform work normally undertaken by Contractor's employees, the cost of such Contract Work shall be billed at Subcontractor's actual hourly billing rate plus 10%, but said rate billable to Exxon shall not exceed Contractor's labor billing rates as stipulated in paragraph (1) of this Exhibit "B" to the Agreement. Any exceptions to the above must be agreed to in writing prior to contracting for subcontractor services.
- (8) When Overhead Expense Billable to Exxon: As stipulated in Paragraph 9 of this Exhibit "B" to the Agreement, certain cost items considered part of Contractor's overhead expense ordinarily shall not be charged directly to Exxon. However, Exxon agrees to accept such charges for those materials and labor services only if they are (i) incurred during other than normal weekday working hours, on weekends or Holidays; (ii) directly traceable to Exxon's work; (iii) for labor during straight time hours, wherein the labor expended involves handling Exxon furnished materials or equipment; and (iv) indicated by Exxon, in writing, that it will accept the charges prior to the commencement of the work which required that the charges be

absorbed by Exxon. Unless the foregoing criteria are met in whole or in part, under no circumstances shall Exxon agree to pay Contractor for items indicated under Paragraph 9, Exhibit "B," and in all cases item (iv) of this Paragraph 8 shall be adhered to.

- (9) A. Direct labor vs. overhead charges shall be applied in accordance with Contractor's practices for the selected areas as follows:

| | <u>Direct</u> | <u>Overhead</u> |
|---|---------------|-----------------|
| Laborers | X | |
| Superintendent | | X |
| Repair Estimators | | X |
| Departmental Foreman | | X |
| Maintenance and repair of equipment and plant | | X |
| Line handlers and block setters in dry dock | X | |
| Equipment Operators | | X |
| Equipment Dispatchers | | X |
| Tool Room | | X |
| Storemen | | X |
| Office Personnel | | X |
| Plant Security | | X |
| Special Security or Watchmen | X | |
| Safety | | X |
| Purchasing | | X |
| B. Equipment and materials: | | |
| Materials and consumable stocks | X | |
| Fuel for trucks, boilers, compressors | | |
| towboats | | X |
| Equipment | | X |
| Equipment rentals (If required and approved by Exxon) | X | |

(10) Effective Date - This Exhibit "B" is effective on _____.

WITNESS:

EXXON SHIPPING COMPANY

By: _____
"Exxon"

WITNESS:

By: _____
"Contractor"

INVOICE

Labor (Details Appendix B)

Straight Time

| | |
|-----------------------------|--------------|
| 18,763 Hours @ \$22.00/Hour | \$412,756.00 |
|-----------------------------|--------------|

Overtime

| | |
|--|------------------|
| 1,982 Hours @ \$28.00/Hour (Time and Half) | 55,496.00 |
| 270 Hours @ \$35.00/Hour (Double Time) | <u>25,515.00</u> |

| | |
|-------------|--------------|
| Total Labor | \$493,797.00 |
|-------------|--------------|

Material (Details Appendix B)

| | |
|---|-----------|
| Stock Inventory Costs - \$29,884.90 -- 10% Markup | 32,873.40 |
| Outside Direct Purchases - \$60,000.00 - 10% Markup | 66,000.00 |

| | |
|----------------|------------------|
| Total Material | <u>98,873.40</u> |
|----------------|------------------|

Dry Dock Fee

| | |
|---|-----------|
| Haul Day - 22¢ per GRT x 23,762 GRT 1 day | 5,227.64 |
| Lay Day - 20¢ per GRT x 23,762 GRT x 3 days | 14,257.20 |

| | |
|--------------------|------------------|
| Total Dry Dock Fee | <u>19,484.84</u> |
|--------------------|------------------|

Other (as applicable - detail by item under terms of contract)

| | |
|--|-------------------|
| Less Scrap Credit (Appropriate details attached) | <u>(2,732.58)</u> |
|--|-------------------|

| | |
|--------------------|--------------|
| Net Invoice Amount | \$609,422.66 |
|--------------------|--------------|

| | |
|--|------------|
| Less Partial Payment - on date (if applicable) | <u>-0-</u> |
|--|------------|

| | |
|------------|---------------------|
| Amount Due | <u>\$609,422.66</u> |
|------------|---------------------|

LABOR CHARGES

| <u>Repair Item</u> | <u>Job #</u> | <u>Badge #</u> | <u>ST Hrs.</u> | <u>1-1/2 Hrs.</u> | <u>Double</u> | <u>Craft</u> | <u>Location</u> | <u>Date Worked</u> |
|--------------------|----------------|----------------|----------------|-------------------|---------------|--------------|-----------------|--------------------|
| 122 | Item Sub-total | 759 | 56 | 8 | 4 | | | |
| 123 | | 759 | 3754 | 8 | | Pipefitter | Ship | 6/16/89 |
| 123 | | 759 | 5327 | 8 | 2 | Pipefitter | Ship | 6/15/89 |
| 123 | | 759 | 2583 | | | Shipfitter | Ship | 6/17/89 |
| 123 | | 759 | 5983 | 8 | | Welder | Shop | 6/16/89 |
| 123 | Item Sub-total | 759 | 132 | 24 | 16 | | | |
| Job Total | | 759 | 18,763 | 1,982 | 270 | | | |

STOCK MATERIAL

| <u>Repair Item</u> | <u>Description</u> | <u>Job #</u> | <u>Stock #</u> | <u>Date</u> | <u>Shipyard Cost/Unit</u> | <u>Quantity</u> | <u>Total</u> |
|--------------------|--------------------|--------------|----------------|-------------|---------------------------|-----------------|--------------|
| 55 | Item Sub-total | 759 | | | | | \$ 328.56 |
| 56 | Wing Nut | 759 | X53725-A | 6/15/87 | .35 | 52 | 18.28 |
| 56 | STD Bolt 5/8" | 759 | 375834-D | 6/16/87 | .66 | 41 | 27.06 |
| 56 | Item Total | 759 | | | | | 1,190.73 |
| Job Total | | 759 | | | | | \$29,884.90 |

DESCRIPTIVE RECAP3. GRISCOM RUSSEL DISTILLING PLANT FEED HEATERS - 228

Make necessary removals, disconnect and rig two (2) tube bundles from the ship to the shop. Set up and hydro test both tube bundle and shell for inspection by the Owner's Representative. No leaks found. Set up and chemically clean the water side of the heaters. Re-test the tubes for inspection by Owner's Representative. Set up and machine the gasket surface and division plate on the return head. Renew one (1) 1/4" x 6" x 6" steel gauge bracket on the I.B. heater. Fabricate three (3) pencil zincs, for each heater, and install. Reinstall heads and test at 73#. Necessary to renew return heads with ship furnished spares. Reinstall as original. Repair all disturbed insulation.

\$ 4,135.00

4. FORCED DRAFT FANS (2) -310

Clean force draft fans inlet screens impellers, and all air ducts, including below and inlet to burner fronts. Necessary to remove to shop and fair two (2) guards from same. Return to vessel and reinstall when completed.

\$ 956.20

JOB TOTAL-----\$609,422.66

1.0 TECHNICAL CAPABILITIES AND APPROACH

Southwest Marine, Inc. (SWM) maintains the most extensive network of ship repair, modernization, and conversion facilities on the West Coast. All SWM shipyards possess the tools, personnel, and experience to perform any task, large or small.

Recent examples of SWM's technical capabilities include the VIKING SERENADE conversion, during which all SWM divisions participated in the planning, design, fabrication and installation of a new bow, stern, stack mounted disco, and hundreds of new passenger cabins, along with associated support systems; the KEYSTONE CANYON conversion, during which the ship was shortened by removing the mid section of the hull; and the USS FIFE (DD-991) overhaul, during which SWM became the first private West Coast shipyard to install the TOMAHAWK Vertical Launch Missile System.

These seemingly disparate programs have three key things in common: they were all first-time efforts; they were all praised for their technical excellence; and they were all the end result of a major advance planning effort.

SWM has long been a proponent of advance planning; largely because of the pay-off in improved performance during the production phase of a job. SWM was a major participant in the Navy's development of a maintenance program aimed at reducing the time ships spent pierside for repairs. This program, called a "Phased Maintenance Program" (PMP), was patterned after some successful commercial repair concepts which employ a port engineer, use of condition based specifications for component repairs (rather than complete overhaul), and periodic short repair periods instead of major, year long overhauls every five years. A single contractor becomes responsible for all aspects of maintenance and modernization for a specific class or type of ship for a specific period of time (generally five years). Working with the Navy port engineer assigned to the program, the contractor participates in all advance planning functions for that class of ship, including development of work packages, writing of specifications, preparing/modifying drawings, performing shipchecks, upgrading documentation, and ordering materials. It allows for the true scope of work to be defined, provides adequate time to identify and procure material, permits the hiring of a workforce which matches the work scope, supports the development of meaningful work schedules, minimizes emergent work and its associated disruptions, and usually costs the customer less in terms of both time and money.

The PMP approach has been successful for both the Navy and the contractor. The Navy has been able to virtually eliminate the Regular Overhaul (ROH) for ships in the PMP program; the material readiness of the ships has increased; and repair quality has improved since equipment is repaired before serious deterioration occurs, by personnel who have ongoing experience with that equipment. The contractor is able to maintain a stable work force, expand technical capabilities, and improve facilities; all of which improve both the quality and the cost-effectiveness of the work performed.

As SWM expanded facilities and became increasingly involved with the commercial ship repair market, it became evident that one of the weak points in the commercial repair cycle was advance planning. Due to the ships operating schedules and personnel constraints, little time is available for the owner to perform shipchecks, track maintenance, or develop a precise scope of work prior to entering the shipyard. As a result, the work scope bid by the contractor is almost never the scope of the actual work to be performed. SWM has seen job orders increase or decrease by as much as 70% after the ship arrived.

Bill-
This is a "straw man"
#. What is a good #?

Trying to perform under these conditions is extremely expensive for both the customer and the shipyard. Material either has to be expedited or cancelled. Personnel have to be hired or laid off. Emergent work conflicts cause unanticipated scheduling problems and workforce overloads which, in turn, force the shipyard into overtime and other inefficient production methodologies; decrease quality; push the schedule out of the performance window; and drive up costs.

These problems are, with minor differences, the same problems encountered with Navy work before the phased maintenance program began. Recognizing this, SWM looked for an opportunity to apply lessons learned in the Navy PMP to commercial repairs.

West Coast Shipping (WCS), a subsidiary of UNOCAL, provided that opportunity. SWM's Portland division personnel worked with representatives of WCS to establish the basic working relationship, which is very similar to that being proposed to EXXON. For a regularly scheduled availability, WCS provides an outline of the basic scope of work to be performed, and a budget for accomplishing that work. SWM personnel perform shipchecks, refine the workscope, develop work specifications, identify material requirements, and then negotiate the baseline work scope and cost with WCS. As soon as negotiations complete, detailed production schedules are developed, material is ordered, manpower requirements are identified, and any required prefab tasks are performed.

As a result of detailed advance planning, and the knowledge of the shipboard systems gained during shipcheck, the production period proceeds very smoothly. Materials and the trained personnel to install them are waiting when the ship arrives in the yard. A detailed production schedule is progressed continuously to make sure nothing falls behind. WCS and SWM program team members communicate constantly, working to resolve any emergent problems and maintain schedule. The only growth generally experienced is due to "open and inspect" type tasks on equipment that could not be isolated and surveyed during shipcheck.. The ship leaves on or ahead of schedule, on budget, and ready for service. Between availabilities, SWM personnel perform emergent repairs wherever and whenever needed.

The relationship between SWM and WCS has become an ongoing partnership, with both companies striving to meet the same goals: maximize the availability of WCS ships for cargoes; keep the ships in a high state of material readiness; and minimize repair and maintenance costs.

Today, that relationship provides WCS with what they feel are probably the lowest unit operating costs in the industry. The level of maintenance on WCS ships is higher than ever, out of service time is minimal, repair budgets are rarely overrun, and many of the repair planning tasks have been turned over to SWM. In addition, the experience gained with WCS has permitted SWM to establish similar relationships with both Holland-America Lines, and Shell Oil/Marine Transport Lines.

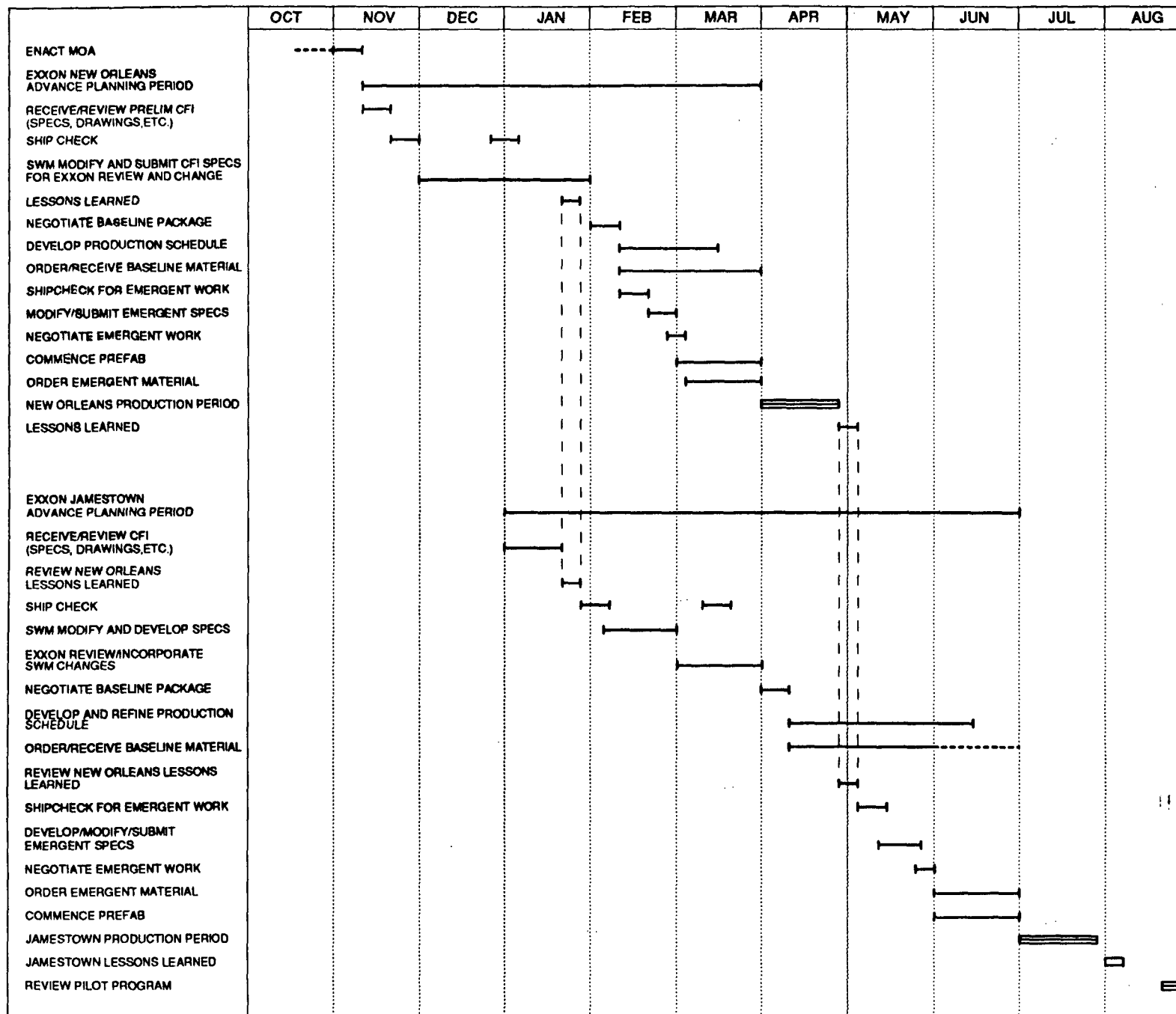
SWM feels that the goals achieved by the Navy and SWM's other commercial customers in this program are essentially the same as EXXON's: maximize vessel availability, maximize quality of repairs, and minimize end costs. Through the use of the advance planning techniques developed by SWM, EXXON could cut its own advance planning costs, accurately plan repair costs, schedule less out-of-service time, and commit to post repair charters with greater confidence.

SWM would like the opportunity to work with EXXON to examine the feasibility of this approach to EXXON's maintenance needs during a pair of closely scheduled

EXXON ship repair availabilities. For purposes of this proposal, SWM has selected upcoming repair periods scheduled for EXXON NEW ORLEANS and EXXON JAMESTOWN to demonstrate the proposed technical approach to SWM and EXXON becoming "Partners in Repair".

Exhibit 1-1

EXXON-SWM "Partners in Repair" Pilot Program



1.1 Technical Approach

The three key elements of SWM's technical approach to the proposed two-ship pilot program are advance planning, production, and lessons learned. Exhibit 1-1 provides a breakdown of the major activities required to prepare for, accomplish, and review the two proposed availabilities. Advance planning covers all activities between completion of procurement negotiations and commencement of the production period. The production period covers the period of time from when the ship enters the yard until it departs. Lessons learned are both a formal and an informal process designed to identify both productive and non-productive processes for inclusion on or exclusion from future projects. Formal lessons learned meetings will be held at key stages of each availability to affect in-process technical improvement.

Advance Planning

Advance planning for the pilot program will encompass a series of tasks which begin with a preliminary data review and proceed through ship checks, SWM-EXXON negotiations, identification of emergent work, material ordering, and prefabrication. The major goal of the advance planning effort is to identify and anticipate the true scope of work to be performed, ensure that the material and manpower required to perform the work is available; and identify and resolve any potential problem areas before they impact the production period. A successful advance planning period will provide both "Partners in Repair" with significant quality, schedule, and cost benefits. The following subsections provide a description of each of the activities displayed in Exhibit 1-1.

1.1.1 EXXON NEW ORLEANS

Customer Furnished Information (CFI) Review

The advance planning process will begin with the receipt of customer furnished information (CFI) for the NEW ORLEANS availability. CFI generally consists of work specifications, drawings, Customer Furnished Material (CFM) schedules, and any technical documentation not normally maintained by a shipyard. SWM is aware that EXXON provides a complete set of specifications for use during the standard bidding process and can use them to perform the work package review. However, it is important to note that SWM also maintains in-house specification writing teams capable of developing work item specifications from raw data and shipchecks.

The primary purpose of the CFI review is to ensure that all documentation required for work package analysis and ship check is on hand and that the proposed scope of work is understood before the shipcheck. Assuming that EXXON will provide the standard work package specifications, SWM would first do a review of all specifications to identify any additional data which may be required. The specifications would then be divided by system and discipline for technical review. SWM planners and trade personnel will analyze the work package for activity interfaces, possible interferences, and other deckplate coordination factors such as access routes and material handling requirements. At the same time, a detailed ship-check schedule will be developed in order to prioritize those work items which need to be further defined. Those work items requesting a price per inch, foot, or other type of unit will receive priority shipcheck attention, since identifying the actual amount to be repaired may permit the owner to readjust budgets and either accomplish more work during the repair period or just take the savings; while permitting SWM to plan for the actual personnel and material requirements for that job

before it enters the shipyard. In those instances where a specification has not been provided, technical data on the particular equipment or system scheduled for repair will be assembled and combined with the raw CFI in preparation for scoping the work during shipcheck. Specifications will then be developed as part of the specification modification process.

Shipchecks

Exhibit 1-1 displays three shipchecks during the advance planning period. The first shipcheck will be performed by SWM personnel to verify specification data; examine working environments for access/egress, interference material, and any unusual conditions which might effect task performance; quantify actual measurements and unit amounts to define the exact amount of piping, number of valves, square feet of decking, etc. which must be repaired; and meet with the port engineer and ship's crew to identify any emergent work which must be addressed. The second shipcheck is optional, and primarily to allow EXXON engineering personnel to validate SWM findings. It may be eliminated if EXXON chooses to participate in the first shipcheck, or has confidence in SWM's recommendations. The third shipcheck occurs approximately 45 days prior to the production period, and after the baseline work package has been developed and approved. The purpose of this shipcheck is to identify any work which has developed since the initial shipchecks in time for inclusion into the production schedule and material ordering process. This effort should serve to minimize the amount of unexpected work identified after start of overhaul, thus minimizing production impact, material delays, overtime, and associated inefficiencies.

Whether work is added to or deleted from the work package, the shipcheck is an extremely important advance planning function. The data gathered during shipcheck permits the development of accurate estimates which, in turn, will allow EXXON to better predict repair costs. It allows technical personnel to become familiar with the systems and equipment before the yard period begins and permits the development of realistic production and manning schedules; the net result being a more efficient yard period that is less costly for EXXON and more profitable for SWM.

Modify and Submit CFI Specifications

As the shipcheck progresses, SWM planning personnel will mark up the CFI specifications to reflect actual quantities and measurements, specific working conditions such as scaffolding requirements, and any other data affecting task performance. Exhibit 1-2 (a) displays a specification taken from the EXXON specification package for EXXON PHILADELPHIA. Exhibit 1-2(b) displays how that same specification might appear as a result of a SWM shipcheck. Specific lengths of pipe and quantities of pipe hangers have been identified; and the pipe sections requiring blasting and preservation have been designated. As a result of this effort, the overall scope of work has been decreased, allowing EXXON to shift funds to other work. However, shipchecks could also identify work which must be performed, but is not included in the specification package. Identification of this work before the production period starts will permit SWM to schedule the work, order material, and allocate personnel resources to accomplish it without having to resort to material expediting, overtime, and other costly emergent work inefficiencies.

Marked up specifications will be turned over to the EXXON representative for review. If EXXON engineering personnel are present at shipcheck, validation of SWM's findings could be performed simultaneously. Otherwise, the specifications would be turned over to EXXON's representative after shipcheck, in which case a second shipcheck might be

Specification, Maintenance & Repair Items
1991 Biennial Drydocking and Overhaul

ITEM 135

FIRE AND FOAM LINES 396 (94D)

Provide labor and material to perform the following to the deck fire and foam lines.

- A. Remove and replace approximately 150' of 5" sched 80 pipe on the foam system that runs from the 8" supply line to #4 monitor, #7 monitor, #10 monitor.
- B. Remove and replace approximately 50' of 6" sched 80 pipe on the foam system at foam sta. #2 & 3. Will need 10' of 4" sched 80 pipe for station TAPS.
- C. Remove and replace app. 100' of 8" sched 80 pipe on the foam system at sta. # 1, 5, 8, 9. Will need 20' of 4" sched 80 pipe for station TAPS.
- D. Replace approximately 25' of 5" and 5' of 4" sched 80 steel pipe on the fire system. The section to be replaced is where fire station #8 is tapped off.
- E. Replace app. 50' of 8" and 10 feet of 4" sched 80 steel pipe on the fire system. The sections to be replaced are where fire stations #9 & #10 are tapped off.
- F. Disconnect 6 ea. 10 ft. sections of 8" pipe and 3 ea. 10 ft. sections of 5" pipe on foam and fire systems. Blast to near white and coat according to paint schedule. Sections to be replaced will be designated by the Chief Mate.
- G. Upon completion of work, system to be pressure tested for tightness of joints and welds. Piping in house and machinery spaces to be isolated by blanking.

Pipe hangers will require approx 25 ea x 8"
3 ea x 6"
3 ea x 4"
6 ea x 5"

Exhibit 1-2(A)
SAMPLE EXXON SPECIFICATION

Specification, Maintenance & Repair Items
1991 Biennial Drydocking and Overhaul

ITEM 135

FIRE AND FOAM LINES 396 (94D)

Provide labor and material to perform the following to the deck fire and foam lines.

- 123'
- A. Remove and replace approximately ~~150'~~^{123'} of 5" sched 80 pipe on the foam system that runs from the 8" supply line to #4 monitor, #7 monitor, #10 monitor.
- 43'
- B. Remove and replace approximately ~~50'~~^{43'} of 6" sched 80 pipe on the foam system at foam sta. #2 & 3. Will need 10' of 4" sched 80 pipe for station TAPS.
- 82'
- C. Remove and replace app. ~~100'~~^{82'} of 8" sched 80 pipe on the foam system at sta. # 1, 5, 8, 9. Will need 20' of 4" sched 80 pipe for station TAPS.
- 32' 7'
- D. Replace approximately ~~25'~~^{32'} of 5" and ~~5'~~^{7'} of 4" sched 80 steel pipe on the fire system. The section to be replaced is where fire station #8 is tapped off.
- 42' 12'
- E. Replace app. ~~50'~~^{42'} of 8" and ~~10'~~^{12'} feet of 4" sched 80 steel pipe on the fire system. The sections to be replaced are where fire stations #9 & #10 are tapped off.
- 5 4
- F. Disconnect ~~5~~⁵ ea. 10 ft. sections of 8" pipe and ~~3~~⁴ ea. 10 ft. sections of 5" pipe on foam and fire systems. Blast to near white and coat according to paint schedule. ~~Sections to be replaced will be designated by the Chief Mate.~~ SEE ATTACHED SKETCHES.
- G. Upon completion of work, system to be pressure tested for tightness of joints and welds. Piping in house and machinery spaces to be isolated by blanking.

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Pipe hangers will require approx ~~25~~¹⁷ ea x 8"
43 ea x 6"
23 ea x 4"
76 ea x 5"

Exhibit 1-2(b)
SAMPLE SWM SPECIFICATION MARK-UP

necessary to validate SWM findings. SWM personnel will work with EXXON personnel to refine the work package to reflect the actual scope of work to be accomplished. SWM is prepared to further support the effort by accomplishing the specification revisions and preparing the final negotiation specifications. This would necessitate EXXON supplying SWM with their specification development software.

Lessons Learned

Following shipcheck and submission of the revised specifications for EXXON review, EXXON will be invited to participate in the pilot program's first "Lessons Learned" conference to discuss the initial NEW ORLEANS advance planning efforts. Problem areas encountered during performance of the NEW ORLEANS CFI review, shipchecks, and specification revision tasks will be discussed and resolved, with improved processes implemented for the just-starting EXXON JAMESTOWN advance planning effort.

Negotiate Baseline Package

Upon receipt of the revised specification package, SWM estimators will develop an estimate for accomplishing the scope of work. That estimate will then be used to negotiate the baseline NEW ORLEANS availability, and establish pricing agreements for any emergent work identified after start of the production period.

Develop Production Schedule

Working with the negotiated specification package, the performance dates, and any customer provided milestones, SWM planning personnel will develop a production schedule for all baseline NEW ORLEANS work. Exhibit 1-3 provides a sample production schedule in the Gantt format. The production schedule will list all work items in the contract, including planned start and completion dates, activity duration, responsibility codes, and as the job progresses, percent complete. The level of detail will vary dependent on the criticality/complexity of the work. Critical material deliveries, quality check points, tests, and other in-process activities will also be displayed. Special emphasis will be placed on removing as much equipment as possible from the ship and performing shop repairs vice in-place repairs, in order to minimize shipboard workspace congestion and other inefficiencies. The production schedule will be "front-loaded" to accomplish those "open and inspect" type tasks that could not be performed during shipchecks, identify any additional work which must be performed, and complete it during the production period.

Order/Receive Baseline Material

As soon as the baseline package is negotiated and approved, SWM material planning personnel will identify and order all materials required to accomplish the identified scope of work. As material is received, it will be staged for incremental installation in accordance with the production schedule. Materials needed for prefabrication activities will be ordered on a priority basis. Due to the relatively short production period, SWM will endeavor to have all material except longlead time material received and staged prior to start of the production period. SWM also anticipates that all EXXON supplied material and equipment will be available at start of the production period.

Shipcheck For Emergent Work

Exhibit 1-3
SAMPLE Production Schedule

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Approximately 45 days before start of production, SWM personnel will perform another shipcheck in conjunction with EXXON personnel to identify and scope any additional work for inclusion into the baseline work package. This final shipcheck will permit the integration of this work into the production schedule, allowing SWM to order and stage material, and allocate personnel to preclude additional expenses due to last-minute material expediting, overtime requirements, and disruption.

Modify/Submit Emergent Specifications

Work identified during the final shipcheck will be incorporated into the work package by either modifying existing baseline specs to include additional work, or developing new specifications to scope the additional tasking. SWM is prepared to perform the specification development for emergent work, if tasked. The revised/new specifications will be submitted to EXXON for review and inclusion in the workpackage.

Negotiate Emergent Work

Work identified and written up during the final shipcheck will be negotiated in accordance with the negotiated procurement pricing agreements. Any work identified subsequent to these negotiations might be subject to a higher rate structure dependent on timing and production impact. These negotiations should complete no later than 30 days prior to start of availability in order to incorporate the work into the production schedule, order material, and allocate manpower.

Commence Prefab

Exhibit 1-1 displays a prefab period commencing 30 days prior to the production period. The actual prefab period would depend on the extent of prefab which could be economically performed prior to the ships arrival. Prefab for extensive alterations could begin as soon as the baseline work package is negotiated, assuming that drawings, etc. are readily available. SWM routinely prefabricates and palletizes foundations, mounting brackets, pipe hangers, and other "stock" pieces. For the EXXON program, SWM will utilize shipchecks to determine piping run lengths, verify structural dimensions, and target equipment in order to prefabricate to the greatest extent possible; thus allowing more time in the production period to assimilate any growth or deliver the ship early.

Order Emergent Material

The process for this task is the same as described previously for baseline material, with the exception that due to the relatively short procurement time available, some material may have to be expedited and some changes may have to be made to the production schedule in order to anticipate mid-production-period material deliveries.

Production Period

The efforts expended during the advance planning phase should yield a trouble-free production period for both "Partners in Repair". Responsibility for the production period will be vested in a small group of experienced managers empowered to commit any SWM resources necessary to meet program objectives. The constant interaction of EXXON and SWM personnel during the advance planning process will ensure that all personnel are "up to speed" on program issues and communications channels are open. All known work will have been scheduled and sequenced to make optimum use of the production period. The disruption and confusion resulting from massive last-minute changes made after the ship entered the yards and the actual scope of work was identified,

will be eliminated. Work package growth should be minimal, being primarily centered on "open and inspect" type work. All material will have been ordered, with most of it received and staged before ship arrival. Prefabricated components will be palletized and ready for installation. The manpower on hand will match the quantity and skill mix requirements of the job, instead of having to be manipulated to accomodate the deletion or addition of work. Since SWM craftspeople have shipchecked the vessel at least once, they will be familiar with the shipboard systems, the exact location of the work to be performed, and the ship's crew; thus eliminating numerous potential start of availability delays. The production period should end with the on-time or early redelivery of NEW ORLEANS in a heightened state of repair.

Lessons Learned

The final lessons learned conference for the NEW ORLEANS availability will center on material, planning, and production processes that either worked well or need to be improved. SWM and EXXON personnel will use these lessons learned to enhance the efforts being expended on the JAMESTOWN.

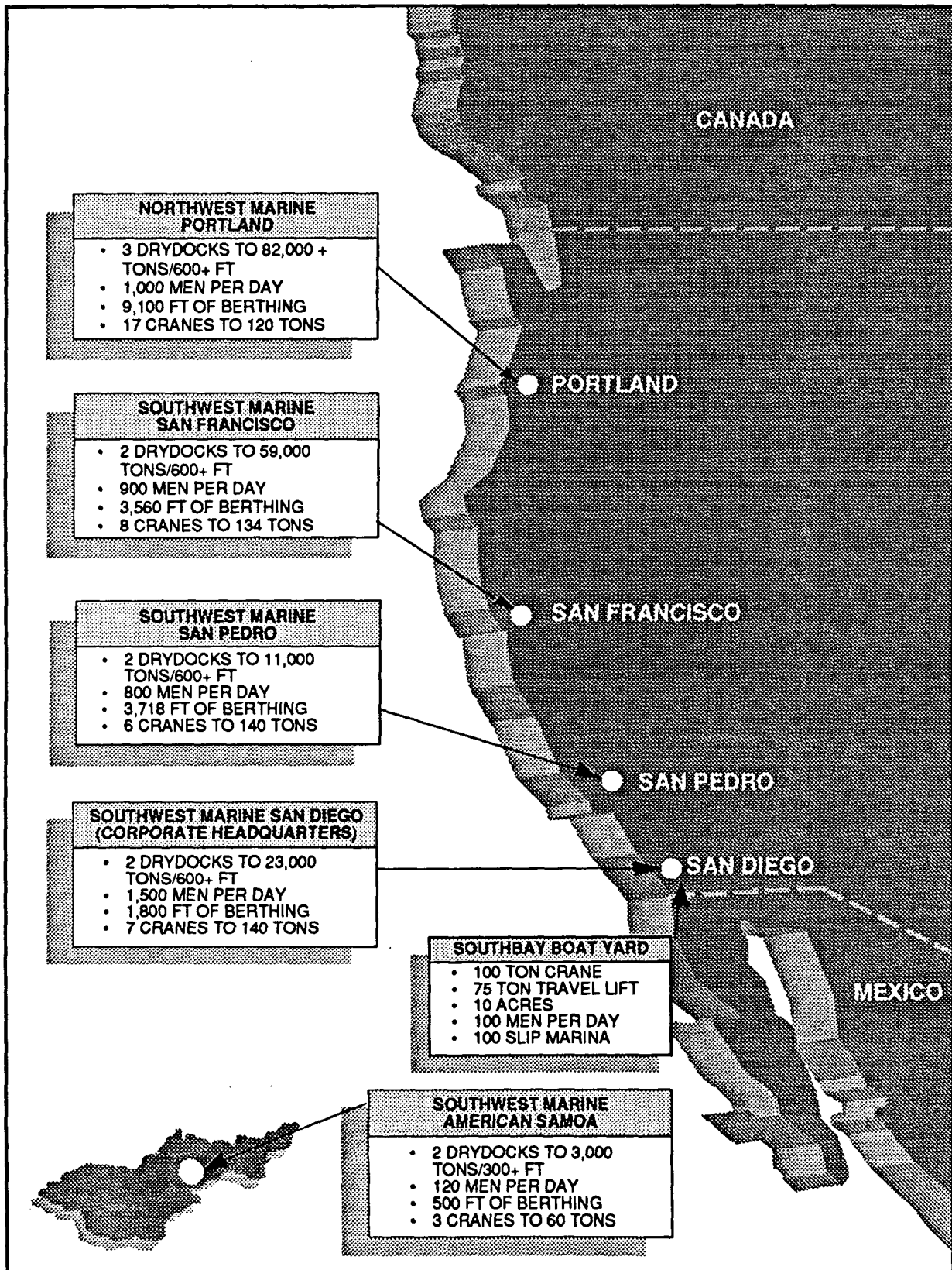
1.1.2 EXXON JAMESTOWN

All activities for the NEW ORLEANS availability will be repeated for the JAMESTOWN. The only exception will be the timeframes for accomplishing the various tasks, since more time will be available to plan JAMESTOWN. It is anticipated that due to the additional time available, and working relationships established between EXXON and SWM personnel, SWM will be allowed to provide even more assistance in the advance planning stages of the JAMESTOWN availability.

1.1.3 REVIEW PILOT PROGRAM

Following completion of the JAMESTOWN availability and its lessons learned conference, A meeting would be held between EXXON and SWM to review the success of the program. SWM projects that significant savings and performance improvements will be achieved by both "Partners in Repair". SWM is confident that any EXXON ships placed in this program will be in a better state of repair at a lower repair dollar ratio by program end.

Exhibit 2-1
Southwest Marine, Inc. Division Locations



2.0 MANAGEMENT CAPABILITY AND APPROACH

2.1 Management Capability

Southwest Marine, Inc. (SWM) was founded in 1977 by Arthur E. Engel because he was not satisfied with the level of service and quality being provided by other shipyards. His success-follows-quality approach to ship repair was proven as SWM continuously expanded to meet increasing customer workloads. Today, SWM is the largest owner-operated ship repair firm in the U.S., with full service shipyards strategically located in Portland, Oregon; San Francisco, San Pedro, and San Diego, California; and American Samoa; as well as several marine subsidiaries providing small boat repair, heavy-lift crane, and passenger ferry/tourist cruise services. Exhibit 2-1 provides an overview of SWM's major West Coast facilities.

SWM's ability to expand capabilities in a market generally considered to be "on-the-decline" in this country is due to a combination of vision and management capability. SWM has consistently explored new management and production techniques and actively seeks new and greater challenges. This willingness to risk has allowed SWM to embrace new management techniques and production technologies which increase customer satisfaction, product quality, cost efficiency, and profit.

SWM's management capabilities have supported virtually every type of commercial and military vessel repair and conversion availability, ranging in scope from the drydocking and repair of the company's own fleet of ferries, barges, and tour boats to the recent design, fabrication and installation of a new bow, sky lounge, ducktail sponsons, and over two hundred passenger cabins aboard M/S VIKING SERENADE. SWM personnel and management capabilities have also supported successful yard periods on numerous liquid, bulk, and container vessels owned by EXXON, Shell Oil/Marine Transport Lines, Keystone, West Coast Shipping, Matson Lines, PEMEX and Holland America Lines; among others.

Programs similar to the proposed EXXON-SWM "Partners in Repair" concept have already been implemented to meet the ongoing repair, maintenance, and modernization needs of West Coast Shipping, Shell Oil/Marine Transport Lines, and Holland-America Lines.

2.1.1 Crafting Quality Environments

SWM's unique position as both a customer and supplier for marine repair services has enhanced SWM's awareness of the needs and responsibilities of both the ship owner and the shipyard in the repair cycle. This awareness is displayed by the company's commitment to the use of Total Quality Management (TQM) techniques for the continuous improvement of both management and production processes. SWM's program, called "Crafting Quality Environments", emphasizes the importance of all participants in each program as both customers and suppliers. Briefly stated, a customer is a receiver, and a supplier is a provider. In ship repair, the ship owner/operator is not only a customer receiving repair services for their ship, but also a supplier, since they provide the shipyard with the object for repair (the ship) and the scope of work which they desire to have performed (the specifications). The success of any ship repair period is as much dependent on the quality and timeliness of the customer's input as it is on the quality and timeliness of the shipyard's services.

Through execution of several Phased Maintenance Programs (PMPs) on Navy ships, SWM has learned that when there is both customer and shipyard involvement with all aspects of the repair cycle from the identification of needed repairs through the final lessons learned conference, it is easier to communicate exactly what the customer needs done and exactly what the shipyard needs to do to accomplish it. Upfront involvement and communication permit both the customer and the shipyard to reach agreement on the scope, schedule, and cost of work. The end result is that the customer enters the shipyard with a clear picture of what is to be done, how long it will take to do it, and how much it will cost.

"Partners in Repair"

The commercial ship repair market currently puts little emphasis on shipyard involvement with advance planning. Generic specifications are written, bid requests ask for "unit prices", and the overall scope of work may increase or decrease dramatically after the ship arrives and the actual scope of work is identified. This approach often leads to extended yard periods, poor quality work, and higher repair costs for the customer. It also puts enormous strain on shipyard resources as material, manpower, and facilities utilization plans are disrupted. All of these problems are avoidable if both the customer and the shipyard get involved with the process at the beginning, communicate needs and concerns, and reach agreement as to the scope of work; time and resources needed to accomplish it; and how much it will cost. SWM would like to apply the previously discussed phased maintenance/advance planning concepts to commercial ship repair. The "Partners in Repair" program would adapt those concepts to EXXON's specific maintenance and repair needs. This is the basis for SWM's proposal that EXXON and SWM become "Partners in Repair."

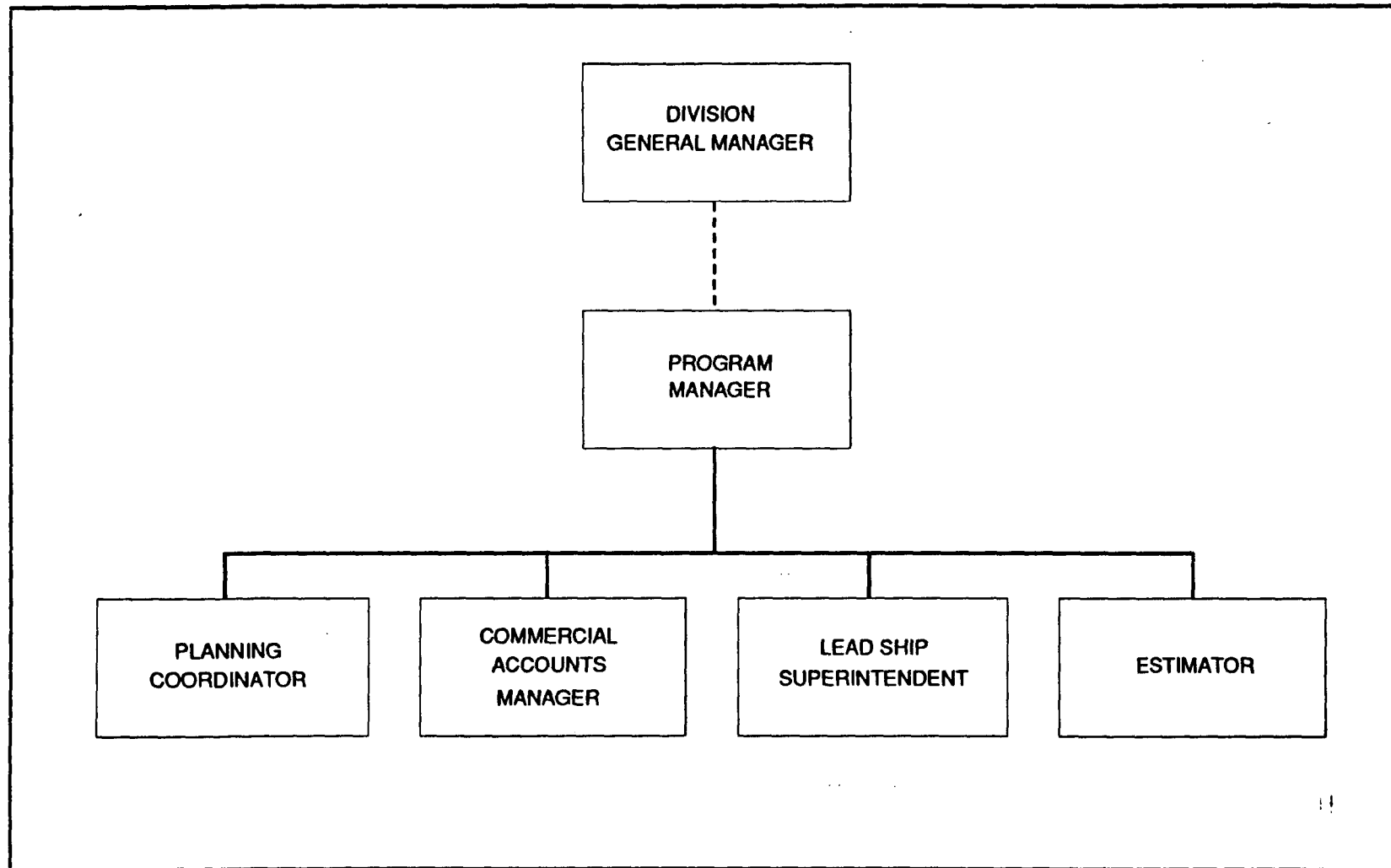
2.2 Management Approach

SWM's management approach to the "Partners in Repair" program includes getting EXXON involved with the concept, discussion of EXXON's and SWM's needs and goals in the repair cycle, and coming to a mutually beneficial agreement on how to meet those goals. Upon reaching consensus, SWM will assign a dedicated program management organization (PMO) to administer the agreement and ensure that EXXON and SWM goals are achieved.

The primary contractual vehicle for the "Partners in Repair" program would be a negotiated procurement for each ship included in the pilot program. EXXON and SWM would "agree to agree" when the program is put into place and negotiate the scope of work identified through joint EXXON-SWM actions during the advance planning period.

Once EXXON and SWM have agreed to the "Partners in Repair" concept, and established any guidelines for the pilot program, SWM will assign the PMO. The PMO approach is used by SWM to manage large scale and complex programs for both Navy PMPs and commercial ship availabilities. The PMO approach focuses authority and responsibility for the program on a team of experienced managers empowered to direct division management and production efforts and allocate personnel and facilities resources to achieve program goals. Exhibit 2.2 displays the proposed PMO for the pilot program. The organization structure avoids the "stove pipe" approach to project management and, instead, promotes interaction of the various program disciplines. All members of this team will be dedicated to the pilot program and, in order to take the greatest advantage of lessons learned, will manage both the NEW ORLEANS and JAMESTOWN availabilities.

Exhibit 2-2
EXXON-SWM "Partners in Repair" Pilot Program
Program Management Organization



The Program Manager will be responsible to the general manager for all aspects of the "Partners in Repair" pilot program, and will be the primary management-level point of contact with EXXON for all matters concerning this effort. The program manager will direct the efforts of all PMO personnel, and will be authorized to represent and commit SWM contractually. Due to the importance of the program to both parties, and the need to establish excellent communications at the outset of the program, EXXON will be asked to participate in the selection of the program manager from SWM's highly qualified management staff.

The Planning Coordinator will be responsible to the program manager for the accurate and timely completion of all advance planning and scheduling tasks, including specification review, shipchecks, specification/drawing development, engineering liaison, and material and production schedule development. During each availability, the planning coordinator will be responsible for progressing the production effort via twice-weekly schedule updates. The planning coordinator will be authorized to draw on any division level support required to meet advance planning commitments.

The Commercial Accounts Manager (CAM) will be responsible to the program manager for the day-to-day coordination of all program activities. The commercial accounts manager will be the primary point of contact for routine contract negotiations as well as interface with EXXON engineering personnel, and will be authorized to represent the program manager in his absence. As with the program manager, EXXON will be invited to participate in the selection of the CAM for this pilot program.

The Lead Ship Superintendent will be responsible to the project manager for the timeliness, quality, and cost effectiveness of the shipboard production effort. They will interface with the CAM on engineering matters, and will be empowered to direct the efforts of all SWM crafts and subcontractors in achieving program goals.

The Estimator will be responsible to the project manager for the preparation of baseline and emergent work estimates for the pilot program. They will work with the CAM to quantify and negotiate work scope. The estimator will be authorized to draw on division level estimating resources to perform assigned tasks.

SWM will supply **Support Personnel** to the PMO from all shipyard departments on an as-requested basis. SWM employs specialists in engineering, naval architecture, CAD, drafting, technical documentation, specification writing, and material management; and will apply these resources to the "Partners in Repair" program at EXXON's request. Tasks which SWM is prepared to assume for EXXON include specification development; preliminary, installation, and as-built drawing development (manual or CAD); material procurement, and stability calculations. In fact, should the opportunity present itself, SWM is prepared to provide EXXON with a complete turn-key advance planning effort from scoping of the baseline work, to development of the final work package and associated technical documents.

2.3 Management Techniques

In addition to the usual array of graphs, schedules, charts, and reports used by all shipyards to gauge progress and management capability, SWM has committed to improving the workplace environment, improving product quality, lowering customer costs, and increasing profit margins by streamlining processes, enhancing internal and external communication channels, and encouraging both the employee and the customer to participate more fully in the entire repair process.

As previously stated, SWM is an advocate of the Total Quality Management (TQM) approach to improving workplace and product quality. SWM has implemented several programs designed to promote involvement, communication, and agreement with both the customer and SWM employees. In addition to Crafting Quality Environments, SWM's internal TQM program, SWM also supports the Ritchie Program, aimed at increasing productivity and accountability at the deckplate levels, and the Operational Awareness Program aimed at improving product flow via enhanced communication throughout the planning and production cycles. These programs are all focused on improving the processes which produce the final product. SWM has traditionally produced a quality product. However, SWM now recognizes that the processes involved were cumbersome and expensive, leading to increased costs and less than desirable productivity levels. The processes were not all internal, either. Many process problems emanate for the traditional ship owner/shipyard relationships. A major SWM goal, as evidenced by "Partners in Repair" and projects with other ship owner/operators, is to identify and improve those customer/supplier processes which have, in the past, cost SWM and its customers time, quality, money, and satisfaction. Working together to improve the entire ship repair and maintenance process will benefit both EXXON and SWM. EXXON will get better service, a higher state of repair for its ships, and a better return on its repair dollar. SWM will be able to maintain a more stable workload, make a reasonable profit, and continue the ongoing process of improvement.

3.0 RESOURCES

Southwest Marine, Inc. (SWM) maintains all resources, including the facilities, personnel, and experience required to fully support the proposed "Partners in Repair" program.

SWM offers EXXON the most comprehensive ship repair facilities on the West Coast. Those facilities include four full service shipyards located in major commercial shipping ports. Combined, these facilities offer EXXON access to 11 marine railways and drydocks with lifting capacity ranging to over 82,000 tons; over 18,000 feet of deep water berthing; gantry, portable and floating cranes to 150 tons; the full range of temporary services; and fully outfitted shops capable of fabricating anything from the smallest bracket to entire ships bows and missile launching modules. Exhibit 3-1 provides an overview of each SWM division's major facility assets.

SWM offers EXXON the largest pool of ship repair talent available on the West Coast. SWM employs a highly skilled and mobile workforce averaging 4,000 men-per-day. SWM can supply any marine support skill needed ranging from laborers to nuclear propulsion specialists. SWM's craftsmen have fabricated and installed liquid cargo transfer systems, stability sponsons, firefighting systems, fireroom ventilation systems, entire bow and stern sections, and weapons suites. SWM's management staff has planned, directed, and negotiated literally hundreds of contracts ranging in scope from the most routine "shave and haircut" to highly complex conversion programs with labor budgets in excess of one million manhours.

Exxon will receive the same high levels of ship repair expertise wherever an EXXON ship needs repair. All SWM personnel, regardless of division, work in accordance with the same company guidelines and procedures. This provides SWM with the unique capability for inter-company transfer of skilled personnel and proven repair techniques. SWM's multiple yard configuration allows different facilities to develop expertise in different areas of ship repair dependent on the customer support base for that facility's location. SWM's Portland and San Francisco facilities primarily support commercial ship repair, while San Diego and San Pedro's proximity to major Navy installations has caused them to develop great expertise in Navy ship repair. However, the VIKING SERENADE, the most complex cruise ship conversion ever accomplished by a US shipyard, was performed in San Diego, with all SWM divisions participating. Portland built the new bow and stern sections. San Diego built the stack-mounted lounge and disco and directed all production efforts, using management and production personnel drawn from the other three divisions for their specific expertise. Conversely, the Portland division recently completed a major year-long overhaul of USS William H. Standley. SWM transferred personnel and lessons-learned from the San Diego division to Portland to support this successful guided missile cruiser overhaul. SWM also maintains the portable tools and equipment to send work crews anywhere in the world where EXXON ships need repair.

SWM has the relevant experience needed to support any EXXON repair requirement. All SWM divisions have supported repairs to liquid cargo tankers and maintain capability to support any type of repairs or alterations to tanker systems. SWM's Portland, San Francisco, and San Pedro divisions have specific experience in the overhaul and repair of EXXON ships.

The following subsections provide an overview of each SWM division's facilities, shops, personnel, and experience.

**Exhibit 3-1
Facility Capacities of Southwest Marine
Division Shipyards**

| LOCATION | SIZE | DRY DOCKS | PIER SPACE | CRANE SERVICE |
|---|----------|--|-------------------------------------|---|
| NORTHWEST MARINE PORTLAND DIVISION | 20 ACRES | 3 DRY DOCKS DRYDOCK NO. 1: 15,238 TONS, 597' LOA BY 88' WIDE DRY DOCK NO. 3: 27,428 TONS, 659' LOA BY 114' WIDE DRYDOCK NO. 4: 82,186 TONS, 981' LOA BY 185' WIDE | 10,102 FEET OF BERTHING SPACE | 16 CRANES WITH CAPACITIES TO 120 TONS |
| SAN FRANCISCO DIVISION | 14 ACRES | 2 DRY DOCKS DRYDOCK NO. 1: 1,900 TONS, 653' LOA BY 100' WIDE DRY DOCK NO. 2: 65,473 TONS, 899' LOA BY 150' WIDE | 3560 FEET OF BERTHING SPACE | 8 CRANES WITH CAPACITIES TO 134 TONS |
| SAN PEDRO DIVISION | 14 ACRES | 2 DRY DOCKS DRY DOCK NO. 1: 50,000 TONS, 656' LOA BY 98' WIDE DRY DOCK NO. 2: 2,540 TONS, 250' LOA BY 111' WIDE | 3717 FEET OF BERTHING SPACE | 6 CRANES WITH CAPACITIES TO 140 TONS |
| SAN DIEGO DIVISION | 9 ACRES | 2 DRY DOCKS DRY DOCK NO. 3: 20,860 TONS, 576' LOA BY 108' WIDE DRY DOCK NO. 4: 3,829 TONS, 397' LOA BY 111' WIDE | 1798 FEET OF BERTHING SPACE | 7 CRANES WITH CAPACITIES TO 150 TONS |

3.1 PORTLAND DIVISION

The Portland, Oregon division, Northwest Marine (NWM), is on the Willamette River, at the Portland Ship Repair Yard (PSRY). NWM maintains its own production shops and administrative areas, but leases drydock and pier space from the PSRY. Exhibit 3.1-1 displays an overview of the NWM/PSRY facility, which has three drydocks to over 82,000 tons, crane service to 120 tons, and full temporary services support. Exhibit 3.1-2 displays the major shop equipment available to support the program. Exhibit 3.1-3 displays the current production manpower for NWM. The extensive transportation fleet of trucks, buses, mobile offices, and other portable support equipment maintained at all Southwest Marine divisions is particularly important to NWM since it allows that division to support pierside repair programs in the Seattle area, which is only a three hour drive from Portland.

The Portland division has accomplished repairs on the following Exxon vessels:

- Exxon Benicia
- Exxon Galveston
- Exxon Jamestown
- Exxon North Slope
- Exxon New Orleans
- Exxon Philadelphia
- Exxon San Francisco
- Exxon Baton Rouge.

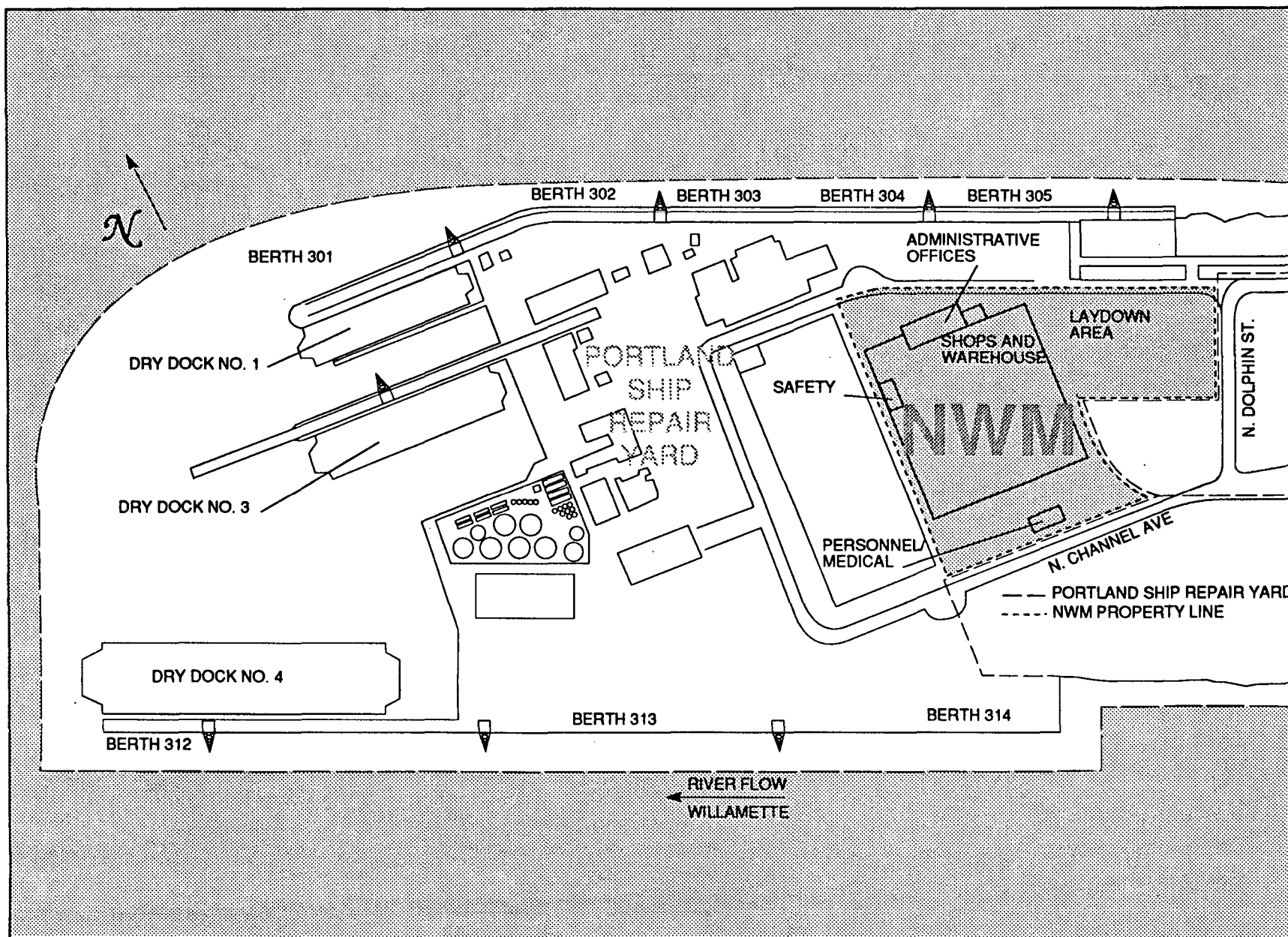


Exhibit 3.1-1
Portland Division (NWM)

SOUTHWEST MARINE, INC.

Exhibit 3.1-2(1)
Portland Shop Equipment

| | | | |
|---|--|---|--|
| MACHINE SHOP | | PIPE SHOP | |
| <u>SHOP SIZE</u> | <u>CRANES</u> | <u>SHOP SIZE</u> | <u>CRANES</u> |
| 30,000 SQ FT | 3-5 TON OVERHEAD BRIDGE CRANES 1-20 TON OVERHEAD BRIDGE CRANE 14-2 TON, 2-5 TON JIB BOOMS | 30,000 SQ FT | 1-5 TON OVERHEAD BRIDGE CRANE 1-10 TON OVERHEAD BRIDGE CRANE 5-2 TON JIB BOOMS |
| <u>STORAGE</u> | | <u>STORAGE</u> | |
| (1) TOOLS | (1) 2,300 SQ FT AND 192 SQ FT PORTABLE TRAILER | (1) TOOLS | (1) 1,440 SQ FT AND 192 SQ FT PORTABLE TRAILER |
| (2) MATERIAL | (2) 5,170 SQ FT | (2) MATERIAL | (2) 2,764 SQ FT |
| <u>LAYDOWN AREA</u> | 3,000 SQ FT OF BREEZEWAY AND 5,000 SQ FT OF SHOP FLOOR | <u>LAYDOWN AREA</u> | 6,000 SQ FT OF BREEZEWAY AND 5,000 SQ FT OF SHOP FLOOR |
| <u>MAJOR MACHINERY</u> | | <u>MAJOR MACHINERY</u> | |
| 1 EA. STEP TOE SHAPER | | 1 EA. RIGID 535 THREADER | |
| 1 EA. RADIAL DRILLS | | 1 EA. RIGID 444 THREADER | |
| 1 EA. PLAIN MILL | | 1 EA. OSTER THREADER | |
| 1 EA. BRIDGEPORT MILL | | 1 EA. TILTING ARM BAND SAW | |
| 1 EA. LATHES | | 1 EA. ABRASIVE CUT-OFF | |
| 1 EA. NIBBLER | | 1 EA. BENCH GRINDER | |
| 1 EA. HORIZONTAL BORING MILL | | 1 EA. BENCH BUFFER | |
| 1 EA. HARD SEAT SURFACE GRINDER | | 2 EA. ENERPACK BENDER | |
| 1 EA. VALVE TEST BENCH TO 2" 3000 PSI | | 1 EA. ZERO PEEN SANDBLASTER | |
| 1 EA. VALVE TEST BENCH TO 2" 30' 1800 PSI | | 1 EA. WELDING POSITIONERS: 300, 2500, AND 3000 LB. CAP. | |
| 1 EA. HYDRAULIC PRESS | | 1 EA. TURNING ROLLS 2000 LB. CAP. | |
| 1 EA. PEDESTAL GRINDER | | 1 EA. PANQJIRIS WELDING POSITIONER | |
| 1 EA. FRICTION CUT-OFF SAW | | 1 EA. TITANIUM WELDING BOOTH | |
| 1 EA. METAL BAND SAW | | 1 EA. HELIASIC WELDER | |
| 1 EA. 7" CARBIDE TOOL GRINDER | | 1 EA. PLASMA CUTTING EQUIPMENT | |
| 1 EA. 6" BENCH GRINDER | | 1 EA. 3000 PSIG HYDRO TEST STAND | |
| 1 EA. 3 STAGE HYDRAULIC FLUSHING AND TESTING UNIT | | | |
| 1 EA. DRILL SHARPENER | | | |
| 1 EA. TOOL GRINDER | | | |
| <u>TEST EQUIPMENT</u> | | <u>TEST EQUIPMENT</u> | |
| (1) FACILITIES | ENVIRONMENTALLY CONTROLLED CALIBRATION LABORATORY CONFIGURED TO NATIONAL BUREAU OF STANDARDS REQUIREMENTS | (1) FACILITIES | EIGHT WELDER CERTIFICATION TEST BOOTHS. ONE 3000 PSIG HYDRO TEST STAND. |
| (2) SPECIAL | VALVE TEST STAND TO 30" @ 1500 PSI. PUMP TEST STAND WITH CERTIFIED POWER SUPPLY. 1000 GPM CAPACITY FOR ANY MEDIUM, CALIBRATED FLOW TANKS | | |
| STRUCTURAL SHOP | | STRUCTURAL SHOP | |
| <u>SHOP SIZE</u> | <u>CRANES</u> | <u>SHOP SIZE</u> | <u>CRANES</u> |
| 45,000 SQ FT | 2-20 TON OVERHEAD BRIDGE CRANES | 45,000 SQ FT | 2-20 TON OVERHEAD BRIDGE CRANES |
| <u>STORAGE</u> | | <u>STORAGE</u> | |
| (1) TOOLS | (1) 2,300 SQ FT | (1) TOOLS | (1) 2,300 SQ FT |
| (2) MATERIAL | (2) 600 SQ FT | (2) MATERIAL | (2) 600 SQ FT |
| <u>LAYDOWN AREA</u> | EIGHT ACRES ADJACENT TO BAY AND 5,000 SQ FT OF SHOP FLOOR | <u>LAYDOWN AREA</u> | EIGHT ACRES ADJACENT TO BAY AND 5,000 SQ FT OF SHOP FLOOR |
| <u>MAJOR MACHINERY</u> | | <u>MAJOR MACHINERY</u> | |
| 1 EA. AUDIOGAUGING EQUIPMENT | | 1 EA. AUDIOGAUGING EQUIPMENT | |
| 1 EA. DRILL PRESS | | 1 EA. DRILL PRESS | |
| 1 EA. 8"X10" BENCH GRINDERS | | 1 EA. 8"X10" BENCH GRINDERS | |
| 1 EA. PRESS | | 1 EA. PRESS | |
| 1 EA. BURNING MACHINES | | 1 EA. BURNING MACHINES | |
| 1 EA. VAC-U LIFT MACHINES | | 1 EA. VAC-U LIFT MACHINES | |
| 1 EA. 20' PLATE ROLL | | 1 EA. 20' PLATE ROLL | |
| 1 EA. 300 AMP SHORT ARC WELDER | | 1 EA. 300 AMP SHORT ARC WELDER | |
| 1 EA. HOLE PUNCH | | 1 EA. HOLE PUNCH | |
| 1 EA. BAND SAWS | | 1 EA. BAND SAWS | |
| 1 EA. ALUMINUM WELDERS | | 1 EA. ALUMINUM WELDERS | |
| 1 EA. SUB-ARC WELDERS | | 1 EA. SUB-ARC WELDERS | |
| 1 EA. DOODLEBUG | | 1 EA. DOODLEBUG | |
| 1 EA. 1500 TON 30' PRESS BRAKE | | 1 EA. 1500 TON 30' PRESS BRAKE | |
| 1 EA. 20' SHEAR | | 1 EA. 20' SHEAR | |

Exhibit 3.1-2(2)
Portland Shop Equipment

ELECTRICAL SHOP

| <u>SHOP SIZE</u> | <u>CRANES</u> |
|------------------|--|
| 15,000 SQ FT | 1-10 TON OVERHEAD BRIDGE CRANE 1-5 TON OVERHEAD CRANE |

STORAGE

| | |
|---------------|-------------------------------------|
| (1) TOOLS | (1) 2,000 SQ FT (ENCLOSED/LOCKABLE) |
| (2) MATERIALS | (2) 2,325 SQ FT (ENCLOSED/LOCKABLE) |

| | |
|---------------------|---|
| <u>LAYDOWN AREA</u> | 3,000 SQ FT OF BREEZEWAY AND 3,000 SQ FT OF SHOP FLOOR |
|---------------------|---|

MAJOR MACHINERY

- 1 EA. ADDRESSOGRAPH MACHINE
- 1 EA. AC DC MG TEST PANEL
- 1 EA. GRINDERS
- 1 EA. WELSAW BAND SAW
- 1 EA. MILLER WELDER 400 AMP
- 1 EA. DISPATCH OVEN
- 1 EA. ROOVERS TAPE WRITER
- 1 EA. DRILL PRESSES
- 1 EA. TRINCO DRY BLASTER
- 1 EA. CROSS CUT SAW
- 1 EA. OXYGEN/ACETYLENE TANKS
- 1 EA. RIGID PIPE THREADER
- 2 EA. 2000 KW SALT BOX

TEST EQUIPMENT

| | |
|----------------|--|
| (1) FACILITIES | ELECTRONIC TEST BENCHES WITH AC/DC POWER SUPPLY. TWO 2,000 KW SALT BOXES |
| (2) SPECIAL | 1,500 SQ FT CONTROLLER OVERHAUL FACILITY BAKE OVENS |

SHEETMETAL SHOP

| <u>SHOP SIZE</u> | <u>CRANES</u> |
|------------------|-------------------------|
| 15,000 SQ FT | 1 OVERHEAD BRIDGE CRANE |

STORAGE

| | |
|--------------|-----------------------------------|
| (1) TOOLS | (1) 700 SQ FT (ENCLOSED/LOCKABLE) |
| (2) MATERIAL | (2) 300 SQ FT (ENCLOSED/LOCKABLE) |

| | |
|---------------------|---|
| <u>LAYDOWN AREA</u> | 3,000 SQ FT OF BREEZEWAY AND 3,000 SQ FT OF SHOP FLOOR |
|---------------------|---|

MAJOR MACHINERY

- 1 EA. 600 AMP WELDERS
- 1 EA. 35 TO 460 AMP MIG WELDER
- 1 EA. PA-3A WIRE FEED
- 1 EA. MIDGET WIRE FEED
- 1 EA. PORTABLE MIG WELDER
- 1 EA. MUBBA IRON MARKER
- 1 EA. 12 X 200 TON PRESS
- 1 EA. 1/4" X 10' SHEAR
- 1 EA. METAL BAND SAW
- 1 EA. 1/2" BENCH DRILLS
- 1 EA. 1/2" STANDING DRILL
- 1 EA. FLANGE PUNCH
- 1 EA. 54" POWER ROLL
- 1 EA. 34" HAND ROLL
- 1 EA. 36" HAND ROLL
- 1 EA. NIBBLER
- 1 EA. SPOT WELDER
- 1 EA. 48" BOX BRAKE
- 1 EA. GRINDERS
- 1 EA. SANDERS
- 4 EA. PLASMA CUTTERS

TEST EQUIPMENT

| | |
|---------|---|
| SPECIAL | FLOW HAND VELOMETER, CYCLOMETER, ANOMETER (ALL CALIBRATED) |
|---------|---|

NOTE:

- ALL LISTED MACHINERY AND SPECIAL EQUIPMENT IS PERMANENTLY OWNED BY NORTHWEST MARINE, INC.
- WORK NEEDING SPECIAL EQUIPMENT NOT OWNED BY NORTHWEST MARINE, INC. WILL BE SUBCONTRACTED OR SPECIAL TOOLS WILL BE LEASED.

Exhibit 3.1-3
Portland Division Production Manpower

| | PRODUCTION CRAFTS | | | | | | PROD * SUPPORT | TOTAL |
|---|-------------------|------|------|-------|----------------|-------|-------------------|-------|
| | STRUCT | MACH | PIPE | ELECT | SHEET METAL | OTHER | | |
| PERSONNEL CURRENTLY ON-BOARD | 226 | 48 | 114 | 69 | 120 | 182 | 98 | 857 |
| SOURCES: RECALL FROM LAYOFF | 173 | 122 | 115 | 50 | 58 | 257* | N/A | 775 |
| UNSOLICITED APPLICATIONS | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| LOCAL LABOR MARKET ** | 450 | 150 | 175 | 11 | 192 | 293* | N/A | 1,271 |
| NOTES: * INDIRECT PERSONNEL ** CURRENT INFORMATION SUPPLIED BY CALIFORNIA EMPLOYMENT DEPARTMENT | | | | | | | | |

3.2 SAN FRANCISCO DIVISION

The San Francisco division is located on the San Francisco waterfront, convenient to all marine facilities. The division has direct access to the open ocean, drydocking capabilities to 59,000 long tons, and the full range of temporary services available. Exhibit 3.2-1 displays an overview of the San Francisco facilities showing administrative, production, pier, and drydock assets. Exhibit 3.2-2 displays the major shop equipment available to support the program. Exhibit 3.2-3 displays the division's current production manpower.

SWM San Francisco has repaired the following Exxon vessels:

- Exxon Baytown.
- Exxon California
- Exxon Baton Rouge
- Exxon Yorktown
- Exxon North Slope
- Exxon Carquinez
- Exxon Long Beach
- Exxon Philadelphia
- Tug and Barge-502.

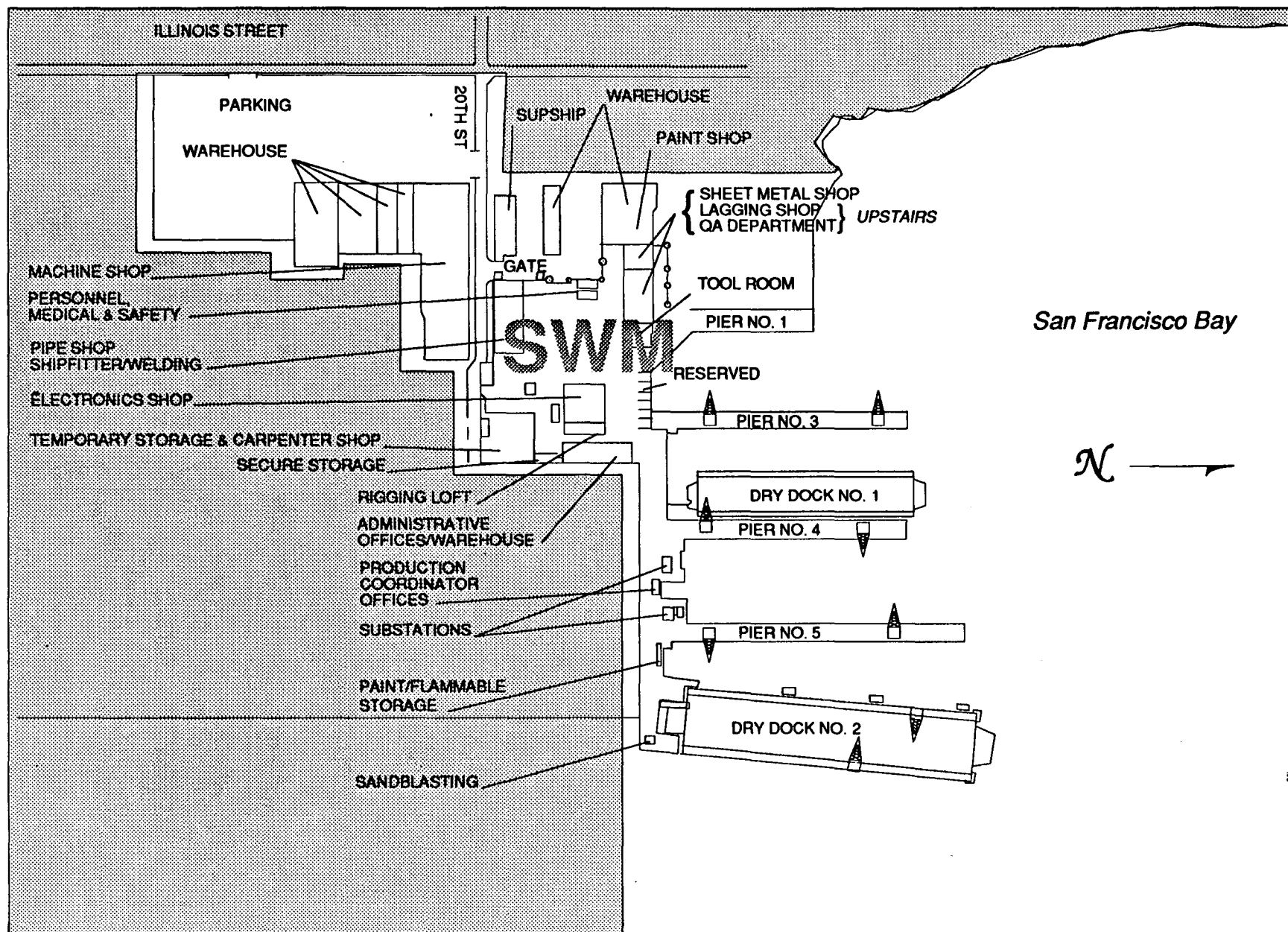


Exhibit 3.2-1
San Francisco Division

SOUTHWEST MARINE, INC.

Exhibit 3.2-2
San Francisco Production Shops

MACHINE SHOPSHOP SIZE CRANES

23,100 SQ. FT. 4-6 TON
 2-20 TON
 2-30 TON

MAJOR MACHINERY

- 1 EA. GRAY OPENSIDE PLANER 86" X 108 X 30"
- 1 EA. GRAY OPENSIDE PLANER 48" X 48" X 18"
- 1 EA. 10" RADIAL DRILL
- 1 EA. 6" RADIAL DRILL
- 1 EA. 7" HORIZONTAL BORING MILL
- 2 EA. 62" VERTICAL BORING MILL
- 2 EA. 100" VERTICAL BORING MILL
- 2 EA. 48" X 76" ENGINE LATHE
- 1 EA. 60" X 48" HEAVY DUTY ENGINE LATHE
- 1 EA. 60" X 30" HEAVY DUTY ENGINE LATHE
- 1 EA. 72" DRAW CUT PLANER
- 1 EA. 30" VERTICAL TURNING AND BORING TOOL
- 3 EA. VARIABLE HORIZONTAL BORING MILL
- 1 EA. 6" X 14" PLANER-MILLER
- 1 EA. 86" X 48" HEAVY DUTY ENGINE LATHE
- 1 EA. 48" X 30" ENGINE LATHE
- 1 EA. 48" X 30" ENGINE LATHE
- 1 EA. (LOT) DRILL PRESS GRINDERS, BENCH SAWS, WELDING AND BURRING EQUIPMENT

PIPE SHOPSHOP SIZE CRANES

7,440 SQ FT 4-5 TON
 2-20 TON
 2-30 TON

MAJOR MACHINERY

- 1 EA. 100 TON HYDRAULIC PRESS
- 1 EA. 10" PLATE ROLL
- 1 EA. 8" HYDRAULIC PIPE BENDER
- 1 EA. 6" HYDRAULIC PIPE BENDER
- 1 EA. 3" HYDRAULIC PIPE BENDER
- 1 EA. 2" HYDRAULIC PIPE BENDER
- 1 EA. 6" THREADING MACHINE
- 12 EA. 1" THREADING MACHINE
- 1 EA. LEBLOND REGAL LATHE, VARIABLE SPEED
- 1 EA. MARVEL BANDSAW
- 1 EA. (LOT) VICES, WORK BENCHES, DRILLS, SANDING & GRINDING MACHINES, WELDING MACHINES

STRUCTURAL SHOPSHOP SIZE CRANES

19,000 SQ FT 2-7 TON
 1-20 TON

MAJOR MACHINERY

- 1 EA. 500 TON HYDRAULIC PLATE BENDER
- 1 EA. 500 TON HYDRAULIC PRESS
- 1 EA. 500 TON PLATE JOGGLER
- 1 EA. 1,200 TON PRESS BRAKE
- 1 EA. 40" PLATE PLANER
- 1 EA. 32" PLATE ROLLS
- 1 EA. 4" RADIAL DRILL
- 1 EA. 70" FLAME PLANER
- 1 LOT DRILL PRESS, SAWS GRINDERS WELDING & BURRING EQUIPMENT

ELECTRICAL SHOPSHOP SIZE CRANES

8,560 SQ FT

MAJOR MACHINERY

- 1 EA. PLATING LATHE
- 1 EA. MACHINE LATHE
- 1 EA. BANDSAW
- 1 EA. BENCH GRINDER
- 1 EA. BEAD BLASTER
- 1 EA. DRILL PRESS 1/2" CAPACITY
- 1 EA. 5,000 KW SALT BOX
- 1 EA. 300 KW SALT BOX
- 1 EA. 777MCM SALT BOX CABLE, 4,800'
- 1 EA. PHOTOACHOMETER
- 2 EA. VIBRATION ANALYZER
- 4 EA. MEGGARS 550V
- 2 EA. V.O.M. DIGITAL
- 5 EA. V.O.M. SIMPSON
- 3 EA. AMMETERS CLAMP-ON 0-1000 AMPS
- 1 EA. AMPTRON 10:1 COIL
- 6 EA. AMPROBE METERS 0-300 AMPS
- 1 EA. CYCLE METER 0-450
- 1 EA. HYPOT
- 2 EA. STROBE-D SCOPE
- 1 EA. PYROMETER 0-250° TEMP INDICATOR
- 2 EA. TWIN HEAT MODULES
- 2 EA. HIGH AMP SWITCHING CONTRACTS
- 1 EA. HYDRAULIC PRESS
- 1 EA. SOLVENT TANK
- 1 EA. BEARING INDUCTION HEATER
- 1 EA. SURGE TESTER
- 3 EA. POWER SUPPLIES 1 AT 400.1 AT 2,000 AMP DC
- 1 EA. (LOT) SMALL TOOLING METERS, THERMOMETERS

SHEETMETAL SHOPSHOP SIZE CRANES

12,000 SQ FT

MAJOR MACHINERY

- 1 EA. JERSON POWER PRESS, T-SUA
- 2 EA. POWER PRESS BRAKE
- 1 EA. PEDESTAL GRINDER
- 3 EA. GRINDER
- 1 EA. STANLEY GRINDER
- 1 EA. BELT SANDER
- 2 EA. BUFFALO IRON WORKER
- 1 EA. WHITNEY PUNCH PRESS
- 1 EA. BLISS PUNCH
- 2 EA. PEXTO POWER ROLL
- 1 EA. RADIAL DRILL
- 1 EA. BUFFALO DRILL, NO. 15
- 1 EA. BUFFALO DRILL, NO. 16
- 1 EA. DRILL PRESS
- 1 EA. WHITNEY MANUAL BRAKE
- 1 EA. CHICAGO MANUAL BRAKE
- 1 EA. PAN BRAKE
- 1 EA. CLEAT BENDER
- 2 EA. ROTEX PUNCH
- 4 EA. MANUAL ROLL

Exhibit 3.2-3
San Francisco Division Production Manpower

| | PRODUCTION CRAFTS | | | | | | PROD * SUPPORT | TOTAL |
|--|-------------------|------|------|-------|----------------|-------|-------------------|-------|
| | STRUCT | MACH | PIPE | ELECT | SHEET METAL | OTHER | | |
| PERSONNEL CURRENTLY ON-BOARD | 118 | 74 | 46 | 25 | 13 | 143 | 42 | 461 |
| SOURCES: RECALL FROM LAYOFF | 320 | 210 | 80 | 185 | 80 | 475 | 45 | 1,395 |
| UNSOLICITED APPLICATIONS | 40 | 50 | 35 | 40 | 30 | 75 | 100 | 370 |
| LOCAL LABOR MARKET ** | 800 | 750 | 250 | 500 | 200 | 800 | 500 | 3,800 |
| NOTES: * INCLUDES QA, PLANNING, PROGRAM MANAGEMENT, ENGINEERING, AND TEST MANAGEMENT ** CURRENT INFORMATION SUPPLIED BY CALIFORNIA EMPLOYMENT DEPARTMENT | | | | | | | | |

3.3 SAN PEDRO DIVISION

The San Pedro division is located on Terminal Island, convenient to all commercial marine facilities in Los Angeles Harbor. The facility has unobstructed access to the ocean, drydocking capabilities to 11,000 long tons, crane capacity to 140 tons, and all temporary services. Exhibit 3.3-1 displays an overview of the San Pedro division, including administrative, production, warehouse, drydock, and pier facilities. Exhibit 3.3-2 displays the major shop equipment available to support this program. Exhibit 3.3-3 displays the division's current production manpower composition.

Since August of 1989, SWM San Pedro has repaired the following Exxon vessels:

- Exxon California
- Exxon Jamestown
- Exxon Maine
- Exxon New Orleans
- Barge-502.

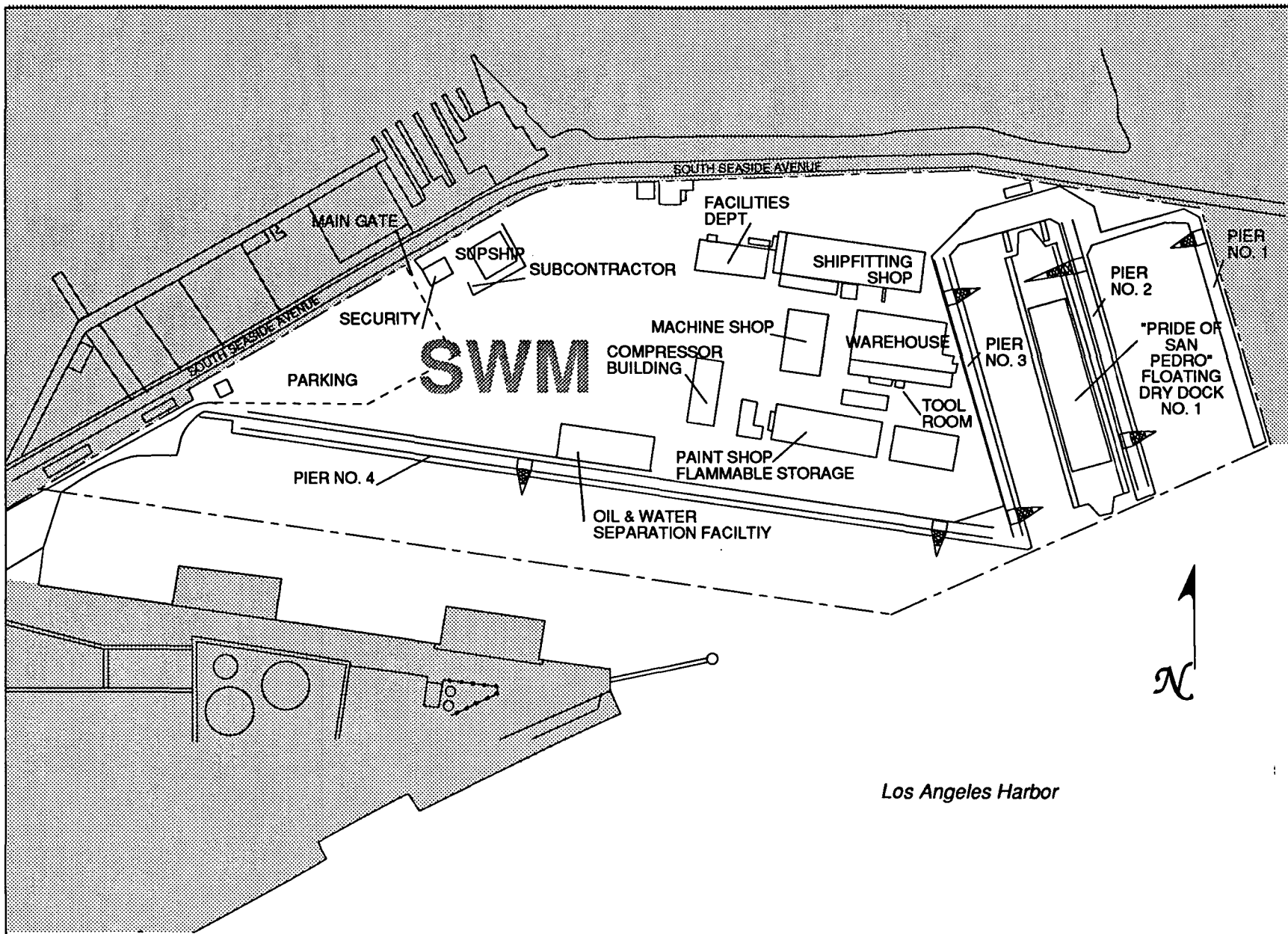


Exhibit 3.3-1
San Pedro Division

SOUTHWEST MARINE, INC.

Exhibit 3.3-2(3)
San Pedro Shop Equipment

| SHIPFITTER SHOP | | SHIPWRIGHT SHOP | |
|---|-----------------------------------|--|-----------------|
| <u>SIZE</u> | <u>CRANES</u> | <u>SIZE</u> | <u>CRANES</u> |
| 28,000 SQ. FT. | 4 EA. 5-TON OVERHEAD BRIDGE CRANE | 5,800 SQ. FT. | |
| <u>STORAGE</u> | | <u>STORAGE</u> | |
| (1) TOOLS | (1) 1,250 SQ. FT. | (1) TOOLS | (1) 100 SQ. FT. |
| (2) MATERIAL | (2) 3,000 SQ. FT. | (2) MATERIAL | (2) 300 SQ. FT. |
| <u>STAGING</u> | 10,700 SQ. FT. | <u>STAGING</u> | 1,000 SQ. FT. |
| <u>MAJOR MACHINERY</u> | | <u>MAJOR MACHINERY</u> | |
| 1 EA. PLATE ROLLS #8 HILLES-JONES | | 1 EA. 36" CUT OFF SAW IRVINGTON | |
| 1 EA. PRESS BRAKE #400 X 14' CINCINNATI | | 1 EA. TURNING LATHE 12" OLIVER | |
| 1 EA. HYDRAULIC PRESS CAMDEN (JOSHUA HANDY) | | 1 EA. 42" BAND SAW TANNEWITZ | |
| 1 EA. PLATE ROLLS POPE | | 1 EA. RADIAL ARM DRILL CINCINNATI | |
| 2 EA. BENDING SLAB 5' X 5' X 4 1/2" | | 1 EA. BAND SAW 36" TOWSLEY | |
| 1 EA. GATE SHEAR MOTOR DRIVE #8 BERTSCH | | 1 EA. PLANE 8" X 2' - 6" AMERICAN YATES | |
| 2 EA. FLAT CAR 8000 # CAPACITY CALLAHAN | | 1 EA. BAND SAW 36" AMERICAN | |
| 1 EA. BAND SAW #8 MARVEL | | 1 EA. DRILL PRESS #18 BUFFALO | |
| 1 EA. PRESS BRAKE #T-TA VERSION | | 1 EA. BENCH GRINDER CINCINNATI | |
| 1 EA. SQUARING SHEAR 10' X 3/8 NIAGRA | | 1 EA. CIRCULAR CUT-OFF SAW 12" DEWALT | |
| 1 EA. STEEL SHEAR #1806 CINCINNATI | | 1 EA. TABLE SANDING MACHINE 12" DELTA | |
| 1 EA. DISC GRINDER #6 GARDNER | | 1 EA. TABLE SAW 14" DELTA | |
| 1 EA. PEDESTAL GRINDER 5 H.P. STANDARD | | 1 EA. TABLE SAW 10" DELTA | |
| 1 EA. PEDESTAL GRINDER 2 H.P. STANDARD | | 1 EA. JIGSAW 10" KALAMAZOO | |
| 1 EA. PEDESTAL GRINDER 2 H.P. CINCINNATI | | 1 EA. DUST COLLECTION SILO WITH COLLECTION SYSTEM | |
| 1 EA. CONTOUR MACHINE AND CAB DO ALL | | 1 EA. DOWLING MACHINE DELTA | |
| 1 EA. IRON WORKER #1 1/2 UNIVERSAL BUFFALO | | 1 EA. BAND SAW 14" #6 DELTA | |
| 1 EA. KIOKE SANS FLAME SHAPE CUTTING MACHINE | | 1 EA. TABLE SAW 8" #3 DELTA | |
| 19 EA. 300 AMP WELDING MACHINE WESTINGHOUSE | | 2 EA. JOINTER 6" #5 DELTA | |
| 1 EA. 500 AMP WELDING MACHINE WESTINGHOUSE | | 1 LOT ASSORTED WOODWORKING TOOLS AND SMALL EQUIPMENT | |
| 5 EA. GAS DRIVE D.C. 250 AMP WELDER WESTINGHOUSE | | 1 LOT PORTABLE SCAFFOLD (STAGING) | |
| 1 EA. POWER SOURCE 1500 AMP LINCOLN/IDEALARC LT-7 TRACTOR | | | |
| 1 EA. TIG UNIT 300 AMP LINCOLN | | | |
| 1 EA. GAS DRIVE D.C. 400 AMP LINCOLN | | | |
| 1 EA. POWER SUPPLY 300 AMP WITH COBRAMATIC GUN LINDE | | | |
| 1 EA. POWER SUPPLY 1500 AMP WITH 8 2 LEAD WELDING UNITS | | | |
| 2 EA. MIGET GUNS AIRCOMATIC | | | |

Exhibit 3.3-3
San Pedro Division Production Manpower

| | PRODUCTION CRAFTS | | | | | | PROD * SUPPORT | TOTAL |
|---|-------------------|------|------|-------|----------------|-------|-------------------|-------|
| | STRUCT | MACH | PIPE | ELECT | SHEET METAL | OTHER | | |
| PERSONNEL CURRENTLY ON-BOARD | 23 | 24 | 15 | 22 | 14 | 145 | 50 | 293 |
| SOURCES: RECALL FROM LAYOFF | 120 | 90 | 100 | 60 | 60 | 320 | 25 | 775 |
| UNSOLICITED APPLICATIONS | 198 | 89 | 203 | 75 | 22 | 626 | 60 | 1,213 |
| LOCAL LABOR MARKET ** | 300 | 250 | 300 | 250 | 150 | 800 | 155 | 2,050 |
| NOTES: * INDIRECT PERSONNEL ** CURRENT INFORMATION SUPPLIED BY CALIFORNIA EMPLOYMENT DEPARTMENT | | | | | | | | |

3.4 SAN DIEGO DIVISION

The San Diego division is located on San Diego Bay, convenient to the 10th Street Marine Terminal and other marine facilities. The facility has unobstructed deep water access from the main shipping channel, two drydocks, crane capacity to 140 tons, and the full range of temporary services. Exhibit 3.4-1 displays an overview of the San Diego division including administrative, production, warehouse, drydock, and pier facilities. Exhibit 3.4-2 displays the major shop equipment available to support this program. Exhibit 3.4-3 displays a breakdown of the division's current production manpower.

Although SWM San Diego division has not directly supported Exxon repair needs, the San Diego division has significant commercial ship repair experience, including the recent MV Viking Serenade conversion for Royal Caribbean Cruise Lines; drydocking and repair of the cruise liners SS Azure Seas and Bermuda Star; and repairs to the hopper/dredge MV Manzanillo II.

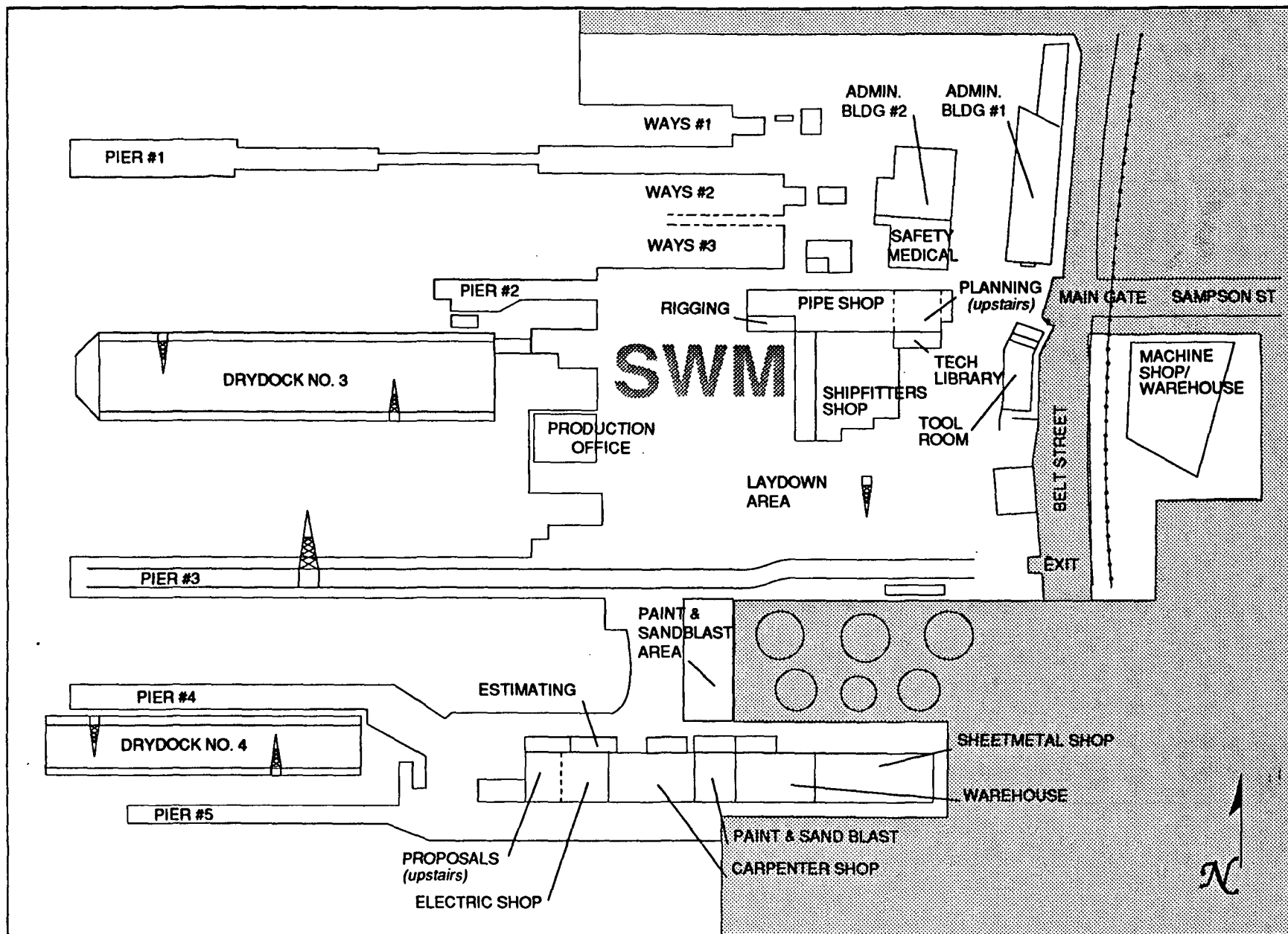


Exhibit 3.4-1
San Diego Division

SOUTHWEST MARINE, INC.

Exhibit 3.4-2(1)
San Diego Shop Equipment

ELECTRICAL SHOP

SIZE CRANE
 10,500 SQ FT (1) 3-3/4 TON JIB CRANE

STORAGE

(1) TOOLS (1) 200 SQ. FT.
 (2) MATERIAL (2) 1,000 SQ. FT.

STAGING 500 SQ. FT.

MAJOR MACHINERY

1 EA. BAKE OVEN
 1 EA. BALANCE MACHINE 3' X 3' SWING
 1 EA. DIP TANK
 1 EA. PLATING LATHE
 1 EA. MACHINE LATHE
 1 EA. BEAD BLASTER
 1 EA. DRILL PRESS. 1/2-INCH CAPACITY
 1 EA. VIBRATION ANALYZER
 2 EA. 50-1000 V MEGGERS
 1 EA. HYPOT
 2 EA. HIGH AMP SWITCHING CONTRACTS
 1 EA. HYDRAULIC PRESS 25 TON, WILSON
 1 EA. SOLVENT TANK
 1 EA. BEARING INDUCTION HEATER
 1 EA. REWIND MACHINE & FULL SET OF HEADS
 1 EA. SURGE TESTER
 3 EA. POWER SUPPLIES, 2 AT 400, 1 AT 800 AMP DC
 1 LOT VARIOUS HAND-HELD MULTIMETERS, CLAMP-ON
 AMMETERS, ETC.
 1 LOT CONNECTOR INSTALLATION TOOLS
 1 EA. 60 HZ REGULATED POWER SUPPLY
 1 EA. 400 HZ REGULATED POWER SUPPLY
 1 LOT GENERAL-PURPOSE ELECTRONIC TEST EQUIPMENT
 1 EA. 6"-12" HORIZONTAL BAND SAW
 1 EA. 18" VERTICAL BAND SAW

SPECIAL FACILITIES WITHIN ELECTRIC & ELECTRONIC SHOPS
TEST 5,000 KW SALT BOX
EQUIPMENT 800 KW SALT BOX
 350-360 KVA REACTIVE/LOAD BANKS

CARPENTER SHOP

SIZE 14,160 SQ. FT.

STORAGE

(1) TOOLS (1) 130 SQ. FT.
 (2) MATERIAL (2) 3,600 SQ. FT.
 (+16,100 SQ. FT. SCAFFOLDING)

STAGING 1,750 SQ. FT.

MAJOR MACHINERY

1 EA. ROCKWELL TILTING ARBOR SAW
 12"-14"
 1 EA. POWERMATIC TABLE SAW 10"
 1 EA. POWERMATIC WOOD LATHE
 1 EA. SOUTH BEND LATHE
 1 EA. YATES BANDSAW
 2 EA. CRESCENT BANDSAW
 1 EA. ROCKWELL RADIAL ARM SAW 16"
 1 EA. CRAFTSMAN RADIAL ARM SAW 10"
 1 EA. ROCKWELL DRILL PRESS
 1 EA. BLACK HAWK DRILL PRESS
 1 EA. OLIVER PLANER
 1 EA. JENISON JOINTER 16"
 1 EA. ROCKWELL JOINTER 8"
 1 EA. FAY-EGAN JOINTER 12"
 1 EA. CRAFTSMAN SHAPER
 1 EA. TOSHIBA DISC SANDER 12"
 1 EA. WALKER-TURNER DISC 10" - BELT SANDER 48"
 1 EA. GENERAL ELECTRIC HACK SAW 18"
 1 EA. DOWEL HOLE MACHINE MILWAUKEE
 1 EA. CRAFTSMAN GRINDER 6"

MACHINE SHOP

SIZE CRANES
 INSIDE: 19,000 SQ. FT. 1 EA. 20 TON OVERHEAD TRAVEL
 CRANE
 OUTSIDE: 6,000 SQ. FT. 1 EA. 10 TON OVERHEAD TRAVEL
 CRANE

STORAGE

(1) TOOLS (1) 500 SQ. FT.
 (2) MATERIAL (2) 1,500 SQ. FT. PLUS YARD STORAGE

STAGING

1,000 SQ. FT.

MAJOR MACHINERY

2 EA. 72" X 34" NILES LATHE
 1 EA. 64" X 36" BETTS LATHE
 1 EA. 32" X 132" SZERSZAM LATHE
 1 EA. 20" X 108" AXELSON LATHE
 1 EA. 20" X 72" DAEWOOD LATHE
 1 EA. 20" X 60" AXELSON LATHE
 3 EA. 42" MILLS
 2 EA. 62" MILLS
 1 EA. 42" VERTICAL GRAFFENSTADEN
 LATHE
 1 EA. 62" VERTICAL KING LATHE
 1 EA. 1/2" ROCKWELL PEDESTAL DRILL
 PRESS
 1 EA. 5" CARLTON RADIAL ARM DRILL
 1 EA. 3" MEUSER RADIAL ARM DRILL
 1 EA. 36" BLANCH GRINDER
 1 EA. 6" X 18" DELTA SURFACE GRINDER
 1 EA. 2-1/2" HORIZONTAL BORING MILL
 1 EA. 5" HORIZONTAL BORING MILL
 1 EA. 36" JOHNSON VERTICAL BAND SAW
 1 EA. 18" X 23" DOALL HORIZONTAL BAND SAW
 1 EA. 25 TON HYDRAULIC PRESS
 1 EA. 50 TON HYDRAULIC PRESS
 1 EA. 2 STATION UNIVERSAL BEAD BLASTER
 VARIOUS GRINDERS & SANDERS

SPECIAL (1) VALVE OVERHAUL & HYDROSTATIC
TEST TESTING CAPABILITIES
EQUIPMENT (2) ROCKWELL HARDNESS TESTER
 20,000 PSI HYDROSTAND

Exhibit 3.4-2(2)
San Diego Shop Equipment

PIPE SHOPSIZE

INSIDE: 6,800 SQ FT

CRANES

- 2 EA. 2 TON OVERHEAD TRAVEL
CRANES
1 EA. 1 TON OVERHEAD TRAVEL
CRANE

STORAGE

- (1) TOOLS (1) 500 SQ. FT.
(2) MATERIAL (2) 7,500 SQ. FT.

STAGING 1,500 SQ. FT.MAJOR MACHINERY

- 4 EA. RIDGID THREADING MACHINES,
1/8" - 6"
1 EA. LEBLOND REGAL LATHE, VARIABLE SPEED
1 EA. COAST BENDER 8" IPS SCH 80
1 EA. PIPE BENDER NO. 2, 2" SCH 80,
5" RADIUS
1 EA. BUFFALO, PUNCH HOLES UP TO
7/8" SHEAR PLATE 5/8"
2 EA. HAND OPERATED HYDRAULIC
BENDER, 1/2" - 2"
2 EA. ELECTRIC HYDRAULIC BENDER,
1/2" - 3"
1 EA. CLARK, 3H9AWD, 12" WHEELS
1 EA. GRAY PEDESTAL GRINDER,
9" WHEELS
6 EA. P-GRINDER, DATCO, 90 DEGREES & STRAIGHT
4 EA. LINCOLN 250 WELDER
1 EA. LINCOLN SHORT ARC WELDER
1 EA. TIG #433 HIGH-FREQUENCY WELDER
2 EA. AEROQUIP 1/4" TO 2" HOSE MACHINE
3 EA. VERTICAL BAND SAWS
1 EA. WALKER TAPERED DRILL PRESS, PEDESTAL
1 EA. CLEARMAN TAPERED DRILL PRESS, BENCH

- SPECIAL (1) SHOP HYDROSTATIC TESTING
TEST CAPABILITIES
EQUIPMENT (2) HYDRO TEST PUMP 6000 PSI

SHEET METAL SHOPSHOP SIZE

13,300 SQ FT

CRANE

1 EA. 1/2 TON CRANE

STORAGE

- (1) TOOLS (1) 210 SQ. FT.
(2) MATERIAL (2) 1,000 SQ. FT. PLUS YARD STORAGE

STAGING

300 SQ. FT.

MAJOR MACHINERY

- 1 EA. POWER SHEAR, WYSON & MILLES,
10", 16 GAUGE
1 EA. POWER BRAKE, PACIFIC 1/4" X 144", 150-TON MAX
1 EA. POWER BRAKE, H.T.C. HYDRA, 96", 14 GAUGE
ASSORTED DIES
1 EA. POWER ROLLER PECK-STOW & WILCOX, 11 GAUGE,
36" ROLLS
1 EA. POWER ROLLER, PECK-STOW & WILCOX, 1/4" THICK,
96" ROLLS
1 EA. HAND BRAKE, CHICAGO, 10-FOOT
2 EA. HAND BRAKE, CHICAGO, 4-FOOT, 48" FINGER BRAKE
1 EA. BAND SAW, DOALL METAL MASTER,
3-WHEEL, ISA
1 EA. IRON CRAWLER W/PUNCHES, NOTCHER, ANGLE
CUTTER & SHEAR
1 EA. TURRET PUNCH, ROTEX, 16 GAUGE, 2-1/2" DIA.,
ASSORTED DIES

SHEET METAL SHOP CONT.MAJOR MACHINERY (CONT)

- 1 EA. CIRCLE CUTTER, GEORGE TOOL CO.,
54" DIA
1 EA. STOMP SHEAR, NIAGARA, 36", 18 GAUGE
1 EA. POWER LOCKFORMER, 16 GAUGE
1 EA. PITTSBURG & PIPELOCK FORMER, 16 GAUGE
2 EA. WELDER, AIRCO 250 AMP TIG, 10-310 AMP
1 EA. HELI WELDER, AIRCO 250 AMP, 7-310 AMP
1 EA. CNC/CAM - PLASMA-ARCH WITH SOFTWARE
2 EA. WELDER, AIRCOMATIC MIG, 20 AMP, AIRCO
WIRE FEEDER
2 EA. WELDER, AIRCO, AC-DC (STICK), 35-270 AMP
1 EA. WELDER AIRCO, CV-250, 16-36 V, 250 AMP
1 EA. HAND ROLLER, PEXTO, 36" ROLLS
2 EA. FORMING, BEADING, EDGING MACHINE, 16 GAUGE
1 EA. BAR FOLDER, NIAGARA, 18 GAUGE
1 EA. 36" PULLMAX NOTCHER
1 EA. HAND BRAKE, CHICAGO, 8"
1 EA. HAND BRAKE, PECK-STOW, 30"
1 EA. BAND SAW, DO-ALL
2 EA. HAND NOTCHER, PECK-STOW/
DI-ACRO
2 EA. DRILL PRESS, SUMMIT
1 EA. PUNCH/FABRICATOR, WALES
3 EA. HAND SHEARS, BEVERLY

SANDBLAST/PAINT SHOPSIZE

20,700 SQ. FT.

STORAGE

- (1) TOOLS (1) 2,000 SQ. FT.
(2) MATERIAL (2) 1,600 SQ. FT.

STAGING

1,400 SQ. FT.

SPECIAL

- TEST SAND RECYCLING EQUIPMENT
EQUIPMENT HAZARDOUS WASTE HANDLING FACILITIES

MAJOR MACHINERY

- 2 EA. 10 TON SANDBLASTING VACUUM
RECOVERY SYSTEM
1 EA. 600 LB SANDBLAST POT, W/ONE
NOZZLE
1 EA. 600 LB SANDBLAST POT, W/2
NOZZLES
2 EA. 6 TON SANDBLAST POT
W/4 NOZZLES
1 EA. 18 TON SANDBLAST POT W/6
NOZZLES
2 EA. 28 TON STEEL-SHOT BLAST POT
W/8 NOZZLES
1 EA. 50 TON STEEL-SHOT BLAST POT
W/8 NOZZLES
1 EA. 400 TON BULK SAND HOPPER
10 EA. 2-1/2 TON FLO-BINS WATERTIGHT
SAND CONTAINERS
2 EA. 34 TON STEEL-SHOT HOPPER FOR 28 TON BLAST POT
6 EA. GRACO AIRLESS PUMP 45:1
3 EA. GRACO AIRLESS PUMP 30:1
10 EA. 2 GALLON CONVENTIONAL
PRESSURE POT
2 EA. 2 GALLON AGITATOR PRESSURE POT (INORGANIC ZINC)
4 EA. 5 GALLON CONVENTIONAL
PRESSURE POT
2 EA. 5 GALLON CONVENTIONAL AGITATOR POT (NON-SKID)
1 EA. SPRAYBOOTH
1 EA. HEATER FOR AIRLESS "HOT
APPLICATION" OF COATINGS
6 EA. BULLARD AIR-BREATHING FILTER
1 EA. BLASTAC MACHINE 48"
1 EA. BLASTAC MACHINE 20"
1 EA. BLASTAC MACHINE 10"
2 EA. DUST COLLECTOR 15,000 CFM
1 EA. DUST COLLECTOR 6,000 CFM

Exhibit 3.4-2(3)
San Diego Shop Equipment

STRUCTURAL SHOPSIZE

16,000 SQ. FT.

CRANES3 EA. 8-3/4 TON JIB CRANE
(SHIPFITTER'S FABRICATION AREA)STORAGE(1) TOOLS (1) MAIN TOOL ROOM (5,500 SQ. FT.)
(2) MATERIAL (2) 15,000 SQ. FT. (YARD STORAGE)STAGING10,000 SQ. FT.
4,000 SQ. FT. (FABRICATION BED)MAJOR MACHINERYIRON WORKING EQUIPMENT

1 EA. RADIAL ARM DRILL
 1 EA. BUFFALO IRON WORKER
 1 EA. TING JIANG PUNCH
 1 EA. CLEVELAND IRON WORKER
 1 EA. DO-ALL BAND SAW
 2 EA. PRESS BRAKE 400-TON
 1 EA. PLATE SHEAR, 3/4" X 12" CAPACITY
 1 EA. PLATE ROLLER, 3/4" PLATE CAPACITY
 1 EA. TRAVAGRAPH OPTICAL BURNING MACHINE
 (SIX BURNER) WITH PAC 44 PLASMA
 1 EA. ABRASIVE CUT-OFF SAW
 1 EA. SHAPE ROLLER
 4 EA. PLATTENS

BURNING/WELDING EQUIPMENT

15 EA. SHAPE RACKS
 160+ WELDING UNITS (OXYACETYLENE, TIG, MIG,
 ARC, PLASMA, HI-FREQ.) AND
 ASSOCIATED POWER SUPPLIES
 50+ WIRE FEEDERS
 1 EA. TANAKA TRACK BURNER
 1 EA. MK RAT-PACK TRACK BURNER
 2 EA. COOPER HEAT SET-UP

RIGGING SHOPSIZE

2,541 SQ. FT.

CRANES

VARIOUS (NOTE 1)

STORAGE(1) TOOLS (1) 300 SQ. FT.
(2) MATERIAL (2) 2,200 SQ. FT. (NOTE 2)STAGING

(NOTE 2)

MAJOR MACHINERY

12 EA. 1/2 TON CHAINFALLS
 38 EA. 1 TON CHAINFALLS
 22 EA. 1-1/2 TON CHAINFALLS
 16 EA. 2 TON CHAINFALLS
 17 EA. 3 TON CHAINFALLS
 4 EA. 4 TON CHAINFALLS
 1 EA. 5 TON CHAINFALLS
 8 EA. 6 TON CHAINFALLS
 3 EA. 8 TON CHAINFALLS
 7 EA. 10 TON CHAINFALLS
 7 EA. 12 TON CHAINFALLS
 2 EA. 17 TON AIR HOIST
 2 EA. 25 TON AIR HOIST
 2 EA. 30 TON CHAINFALLS
 14 EA. 3/4 TON COME-A-LONG
 33 EA. 1 TON COME-A-LONG
 48 EA. 1-1/2 TON COME-A-LONG
 30 EA. 3 TON COME-A-LONG
 14 EA. 6 TON COME-A-LONG
 1 LOT SLINGS, SHACKLES, RIGGING
 GEAR, DOLLIES
 1 EA. ZINC SMELTING FURNACE
 1 EA. CUT OFF MACHINE 14"
 1 EA. DRILL PRESS
 1 EA. GRINDER 10"
 1 EA. WELDING MACHINE
 1 EA. PYROMETER
 6 EA. HYDRUSHEAR
 1 EA. HYDRAULIC SWAGER

SPECIAL
TEST
EQUIPMENT

(1) FACILITIES (1) 10 EA. 10 LBS STEEL WEIGHTS
 250 EA. 50 LBS LEADS INGOTS
 20 EA. 85 LBS CONCRETE BLOCKS
 1 LOT TEST WEIGHTS 100 LBS TO
 30,000 LBS
 1 EA. HYDRAULIC DECK TIEDOWN
 TESTER
 1 EA. PADEYE TESTER
 1 LOT DYNAMOMETERS TO 100,000 LBS
 1 EA. LOAD CELL 150,000 LBS
 1 EA. DECK TIE DOWN TESTER

(2) SPECIAL (2) 1 EA. TUGBOAT
 1 EA. PUSHBOAT

NOTE:(1) A COMMON AREA WITH 2,200 SQ. FT. IS UTILIZED FOR
BOTH STORAGE AND STAGING.

Statement of Purpose

The purpose of this proposal is to provide both EXXON and Southwest Marine, Inc. (SWM) with a vehicle for movement toward a more positive, professional, and cost effective relationship; wherein both parties would achieve specific, mutually supportive goals.

Since this proposal is unsolicited, and does not respond to any specific EXXON tasking, certain assumptions have been made by SWM based on our ongoing support of the ship repair industry, and a general knowledge of EXXON's ship repair support needs.

SWM assumes that EXXON's fleet maintenance, repair, and modernization goals focus on three key areas: Quality, Timeliness, and Cost. Better quality repairs will prolong service life and ensure vessel availability for cargoes. Timeliness of repairs will enable EXXON to meet both vessel maintenance and cargo commitments. Reasonable and foreseeable costs will enable EXXON to refine maintenance budgets and improve repair dollar return ratios.

SWM's goals closely parallel EXXON's. They are Quality; Stable, Predictable Facilities Utilization; and Profit. The quality of SWM's work is unmatched. But quality can fall victim to the low bid scenario, if workforce levels and training cannot be maintained due to lack of work. Stabilization of workload through the implementation of long-range programs such as this will permit SWM to maintain a well trained workforce, and constantly improve quality through both on-the-job and formal training and certification programs. Maximum facilities utilization means busy piers and drydocks. SWM operates the most extensive ship repair facilities on the West Coast. A constant workload in all locations is required to properly maintain and improve these assets. Establishment of this agreement with EXXON would help to stabilize facility utilization and allow SWM to further improve capabilities to provide even better customer support. A reasonable margin of profit will enable SWM to invest in new cost and time-saving technologies; hire the best available marine talent; and continue to improve work processes; thus improving quality, timeliness, and cost returns for both EXXON and SWM.

In order to achieve EXXON and SWM goals, while developing a more positive approach to ship repair as it applies to the American Maritime Industry, SWM proposes that we become "Partners in Repair."

The "Partner's In Repair" concept is relatively simple, having only three key elements: Involvement, Communication, and Agreement. Successful execution of this concept will require an upfront commitment from both EXXON and SWM to devote the time, talent, and trust needed to make it work.

SWM is currently supporting the needs of several commercial ship owner/operators with programs similar in concept, with great success in terms of customer satisfaction, lower maintenance cost, and quality of work.

This proposal outlines SWM's approach to becoming "Partners In Repair" with EXXON. True to the concept, its purpose is to act as a catalyst for our mutual involvement in identifying and quantifying program goals; our open communication of needs and concerns; and, finally, our agreement on a mutually beneficial partnership.

PROPOSAL

Southwest Marine, Inc. (SWM) is very interested in establishing a mutually supportive business agreement with EXXON Shipping Company (EXXON) whereby SWM would provide total support for all EXXON ship repair, modernization, and conversion needs on the West Coast. SWM maintains extensive ship repair and conversion facilities in Portland, Oregon and San Francisco, San Pedro and San Diego, California. These assets, including skilled management, engineering, and production personnel; deep-water berths and drydocks; and fully equipped service shops would be made available to EXXON to support both scheduled and emergent repair requirements.

The primary contractual vehicle would be a Negotiated Procurement for each individual ship availability to identify the specific work to be accomplished and establish pricing, performance periods, and any other project critical factors.

Recognizing that entering into this type of agreement represents a change from standard procedures for both parties, SWM proposes that a trial program covering two consecutive ship repair periods be established. The two ship program is recommended because, although SWM is certain that a significant amount of savings can be realized through joint EXXON-SWM advance planning for one ship; use of lessons learned from the first availability will greatly enhance the advance planning (and thus, production) efforts for the second ship; the end result being significantly greater proof (in terms of quality, cost, and time) of the feasibility of the proposed "Partners in Repair" arrangement.

The technical proposal which follows provides an overview of the SWM's approach to providing the technical, management, and facilities support required to support EXXON's West Coast ship repair and modernization needs.

1.0 TECHNICAL CAPABILITIES AND APPROACH

Southwest Marine, Inc. (SWM) maintains the most extensive network of ship repair, modernization, and conversion facilities on the West Coast. All SWM shipyards possess the tools, personnel, and experience to perform any task, large or small.

Recent examples of SWM's technical capabilities include the VIKING SERENADE conversion, during which all SWM divisions participated in the planning, design, fabrication and installation of a new bow, stern, stack mounted disco, and hundreds of new passenger cabins, along with associated support systems; the KEYSTONE CANYON conversion, during which the ship was shortened by removing the mid section of the hull; and the USS FIFE (DD-991) overhaul, during which SWM became the first private West Coast shipyard to install the TOMAHAWK Vertical Launch Missile System.

These seemingly disparate programs have three key things in common: they were all first-time efforts; they were all praised for their technical excellence; and they were all the end result of a major advance planning effort.

SWM has long been a proponent of advance planning; largely because of the pay-off in improved performance during the production phase of a job. SWM was a major participant in the Navy's development of a maintenance program aimed at reducing the time ships spent pierside for repairs. This program, called a "Phased Maintenance Program" (PMP), was patterned after some successful commercial repair concepts which employ a port engineer, use of condition based specifications for component repairs (rather than complete overhaul), and periodic short repair periods instead of major, year long overhauls every five years. A single contractor becomes responsible for all aspects of maintenance and modernization for a specific class or type of ship for a specific period of time (generally five years). Working with the Navy port engineer assigned to the program, the contractor participates in all advance planning functions for that class of ship, including development of work packages, writing of specifications, preparing/modifying drawings, performing shipchecks, upgrading documentation, and ordering materials. It allows for the true scope of work to be defined, provides adequate time to identify and procure material, permits the hiring of a workforce which matches the work scope, supports the development of meaningful work schedules, minimizes emergent work and its associated disruptions, and usually costs the customer less in terms of both time and money.

The PMP approach has been successful for both the Navy and the contractor. The Navy has been able to virtually eliminate the Regular Overhaul (ROH) for ships in the PMP program; the material readiness of the ships has increased; and repair quality has improved since equipment is repaired before serious deterioration occurs, by personnel who have ongoing experience with that equipment. The contractor is able to maintain a stable work force, expand technical capabilities, and improve facilities; all of which improve both the quality and the cost-effectiveness of the work performed.

As SWM expanded facilities and became increasingly involved with the commercial ship repair market, it became evident that one of the weak points in the commercial repair cycle was advance planning. Due to the ships operating schedules and personnel constraints, little time is available for the owner to perform shipchecks, track maintenance, or develop a precise scope of work prior to entering the shipyard. As a result, the work scope bid by the contractor is almost never the scope of the actual work to be performed. SWM has seen job orders increase or decrease by as much as 70% after the ship arrived.

Bill-
This is a "strawman"
#. What is a good #?

Trying to perform under these conditions is extremely expensive for both the customer and the shipyard. Material either has to be expedited or cancelled. Personnel have to be hired or laid off. Emergent work conflicts cause unanticipated scheduling problems and workforce overloads which, in turn, force the shipyard into overtime and other inefficient production methodologies; decrease quality; push the schedule out of the performance window; and drive up costs.

These problems are, with minor differences, the same problems encountered with Navy work before the phased maintenance program began. Recognizing this, SWM looked for an opportunity to apply lessons learned in the Navy PMP to commercial repairs.

West Coast Shipping (WCS), a subsidiary of UNOCAL, provided that opportunity. SWM's Portland division personnel worked with representatives of WCS to establish the basic working relationship, which is very similar to that being proposed to EXXON. For a regularly scheduled availability, WCS provides an outline of the basic scope of work to be performed, and a budget for accomplishing that work. SWM personnel perform shipchecks, refine the workscope, develop work specifications, identify material requirements, and then negotiate the baseline work scope and cost with WCS. As soon as negotiations complete, detailed production schedules are developed, material is ordered, manpower requirements are identified, and any required prefab tasks are performed.

As a result of detailed advance planning, and the knowledge of the shipboard systems gained during shipcheck, the production period proceeds very smoothly. Materials and the trained personnel to install them are waiting when the ship arrives in the yard. A detailed production schedule is progressed continuously to make sure nothing falls behind. WCS and SWM program team members communicate constantly, working to resolve any emergent problems and maintain schedule. The only growth generally experienced is due to "open and inspect" type tasks on equipment that could not be isolated and surveyed during shipcheck.. The ship leaves on or ahead of schedule, on budget, and ready for service. Between availabilities, SWM personnel perform emergent repairs wherever and whenever needed.

The relationship between SWM and WCS has become an ongoing partnership, with both companies striving to meet the same goals: maximize the availability of WCS ships for cargoes; keep the ships in a high state of material readiness; and minimize repair and maintenance costs.

Today, that relationship provides WCS with what they feel are probably the lowest unit operating costs in the industry. The level of maintenance on WCS ships is higher than ever, out of service time is minimal, repair budgets are rarely overrun, and many of the repair planning tasks have been turned over to SWM. In addition, the experience gained with WCS has permitted SWM to establish similar relationships with both Holland-America Lines, and Shell Oil/Marine Transport Lines.

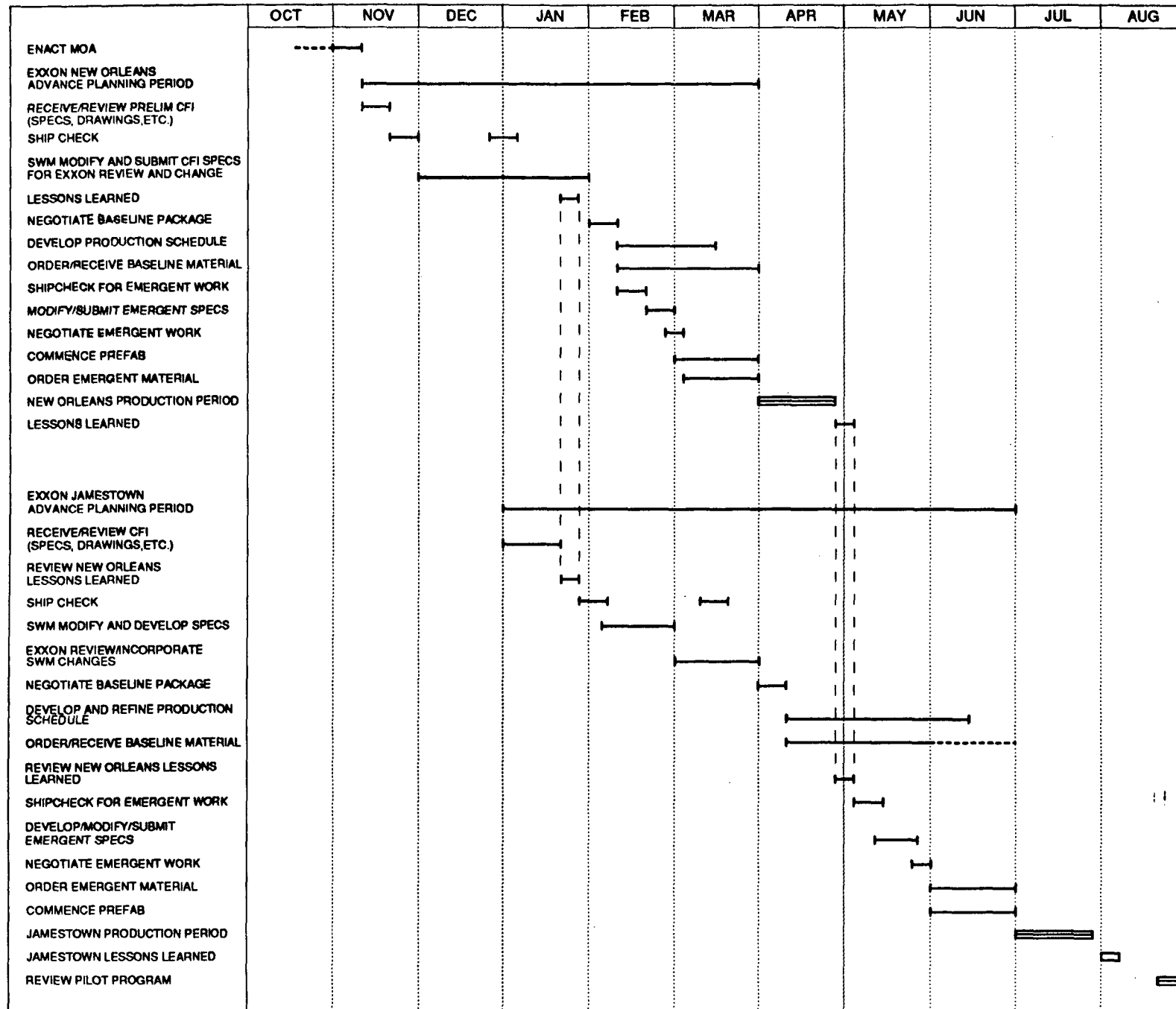
SWM feels that the goals achieved by the Navy and SWM's other commercial customers in this program are essentially the same as EXXON's: maximize vessel availability, maximize quality of repairs, and minimize end costs. Through the use of the advance planning techniques developed by SWM, EXXON could cut its own advance planning costs, accurately plan repair costs, schedule less out-of-service time, and commit to post repair charters with greater confidence.

SWM would like the opportunity to work with EXXON to examine the feasibility of this approach to EXXON's maintenance needs during a pair of closely scheduled

EXXON ship repair availabilities. For purposes of this proposal, SWM has selected upcoming repair periods scheduled for EXXON NEW ORLEANS and EXXON JAMESTOWN to demonstrate the proposed technical approach to SWM and EXXON becoming "Partners in Repair".

Exhibit 1-1

EXXON-SWM "Partners in Repair" Pilot Program



1.1 Technical Approach

The three key elements of SWM's technical approach to the proposed two-ship pilot program are advance planning, production, and lessons learned. Exhibit 1-1 provides a breakdown of the major activities required to prepare for, accomplish, and review the two proposed availabilities. Advance planning covers all activities between completion of procurement negotiations and commencement of the production period. The production period covers the period of time from when the ship enters the yard until it departs. Lessons learned are both a formal and an informal process designed to identify both productive and non-productive processes for inclusion on or exclusion from future projects. Formal lessons learned meetings will be held at key stages of each availability to affect in-process technical improvement.

Advance Planning

Advance planning for the pilot program will encompass a series of tasks which begin with a preliminary data review and proceed through ship checks, SWM-EXXON negotiations, identification of emergent work, material ordering, and prefabrication. The major goal of the advance planning effort is to identify and anticipate the true scope of work to be performed, ensure that the material and manpower required to perform the work is available; and identify and resolve any potential problem areas before they impact the production period. A successful advance planning period will provide both "Partners in Repair" with significant quality, schedule, and cost benefits. The following subsections provide a description of each of the activities displayed in Exhibit 1-1.

1.1.1 EXXON NEW ORLEANS

Customer Furnished Information (CFI) Review

The advance planning process will begin with the receipt of customer furnished information (CFI) for the NEW ORLEANS availability. CFI generally consists of work specifications, drawings, Customer Furnished Material (CFM) schedules, and any technical documentation not normally maintained by a shipyard. SWM is aware that EXXON provides a complete set of specifications for use during the standard bidding process and can use them to perform the work package review. However, it is important to note that SWM also maintains in-house specification writing teams capable of developing work item specifications from raw data and shipchecks.

The primary purpose of the CFI review is to ensure that all documentation required for work package analysis and ship check is on hand and that the proposed scope of work is understood before the shipcheck. Assuming that EXXON will provide the standard work package specifications, SWM would first do a review of all specifications to identify any additional data which may be required. The specifications would then be divided by system and discipline for technical review. SWM planners and trade personnel will analyze the work package for activity interfaces, possible interferences, and other deckplate coordination factors such as access routes and material handling requirements. At the same time, a detailed ship-check schedule will be developed in order to prioritize those work items which need to be further defined. Those work items requesting a price per inch, foot, or other type of unit will receive priority shipcheck attention, since identifying the actual amount to be repaired may permit the owner to readjust budgets and either accomplish more work during the repair period or just take the savings; while permitting SWM to plan for the actual personnel and material requirements for that job

before it enters the shipyard. In those instances where a specification has not been provided, technical data on the particular equipment or system scheduled for repair will be assembled and combined with the raw CFI in preparation for scoping the work during shipcheck. Specifications will then be developed as part of the specification modification process.

Shipchecks

Exhibit 1-1 displays three shipchecks during the advance planning period. The first shipcheck will be performed by SWM personnel to verify specification data; examine working environments for access/egress, interference material, and any unusual conditions which might effect task performance; quantify actual measurements and unit amounts to define the exact amount of piping, number of valves, square feet of decking, etc. which must be repaired; and meet with the port engineer and ship's crew to identify any emergent work which must be addressed. The second shipcheck is optional, and primarily to allow EXXON engineering personnel to validate SWM findings. It may be eliminated if EXXON chooses to participate in the first shipcheck, or has confidence in SWM's recommendations. The third shipcheck occurs approximately 45 days prior to the production period, and after the baseline work package has been developed and approved. The purpose of this shipcheck is to identify any work which has developed since the initial shipchecks in time for inclusion into the production schedule and material ordering process. This effort should serve to minimize the amount of unexpected work identified after start of overhaul, thus minimizing production impact, material delays, overtime, and associated inefficiencies.

Whether work is added to or deleted from the work package, the shipcheck is an extremely important advance planning function. The data gathered during shipcheck permits the development of accurate estimates which, in turn, will allow EXXON to better predict repair costs. It allows technical personnel to become familiar with the systems and equipment before the yard period begins and permits the development of realistic production and manning schedules; the net result being a more efficient yard period that is less costly for EXXON and more profitable for SWM.

Modify and Submit CFI Specifications

As the shipcheck progresses, SWM planning personnel will mark up the CFI specifications to reflect actual quantities and measurements, specific working conditions such as scaffolding requirements, and any other data affecting task performance. Exhibit 1-2 (a) displays a specification taken from the EXXON specification package for EXXON PHILADELPHIA. Exhibit 1-2(b) displays how that same specification might appear as a result of a SWM shipcheck. Specific lengths of pipe and quantities of pipe hangers have been identified; and the pipe sections requiring blasting and preservation have been designated. As a result of this effort, the overall scope of work has been decreased, allowing EXXON to shift funds to other work. However, shipchecks could also identify work which must be performed, but is not included in the specification package. Identification of this work before the production period starts will permit SWM to schedule the work, order material, and allocate personnel resources to accomplish it without having to resort to material expediting, overtime, and other costly emergent work inefficiencies.

Marked up specifications will be turned over to the EXXON representative for review. If EXXON engineering personnel are present at shipcheck, validation of SWM's findings could be performed simultaneously. Otherwise, the specifications would be turned over to EXXON's representative after shipcheck, in which case a second shipcheck might be

Specification, Maintenance & Repair Items
1991 Biennial Drydocking and Overhaul

ITEM 135

FIRE AND FOAM LINES 396 (94D)

Provide labor and material to perform the following to the deck fire and foam lines.

- A. Remove and replace approximately 150' of 5" sched 80 pipe on the foam system that runs from the 8" supply line to #4 monitor, #7 monitor, #10 monitor.
- B. Remove and replace approximately 50' of 6" sched 80 pipe on the foam system at foam sta. #2 & 3. Will need 10' of 4" sched 80 pipe for station TAPS.
- C. Remove and replace app. 100' of 8" sched 80 pipe on the foam system at sta. # 1, 5, 8, 9. Will need 20' of 4" sched 80 pipe for station TAPS.
- D. Replace approximately 25' of 5" and 5' of 4" sched 80 steel pipe on the fire system. The section to be replaced is where fire station #8 is tapped off.
- E. Replace app. 50' of 8" and 10 feet of 4" sched 80 steel pipe on the fire system. The sections to be replaced are where fire stations #9 & #10 are tapped off.
- F. Disconnect 6 ea. 10 ft. sections of 8" pipe and 3 ea. 10 ft. sections of 5" pipe on foam and fire systems. Blast to near white and coat according to paint schedule. Sections to be replaced will be designated by the Chief Mate.
- G. Upon completion of work, system to be pressure tested for tightness of joints and welds. Piping in house and machinery spaces to be isolated by blanking.

Pipe hangers will require approx 25 ea x 8"
3 ea x 6"
3 ea x 4"
6 ea x 5"

Exhibit 1-2(A)
SAMPLE EXXON SPECIFICATION

Specification, Maintenance & Repair Items
1991 Biennial Drydocking and Overhaul

ITEM 135

FIRE AND FOAM LINES 396 (94D)

Provide labor and material to perform the following to the deck fire and foam lines.

- 123'
- A. Remove and replace ~~approximately 150'~~ of 5" sched 80 pipe on the foam system that runs from the 8" supply line to #4 monitor, #7 monitor, #10 monitor.
- 43'
- B. Remove and replace ~~approximately 50'~~ of 6" sched 80 pipe on the foam system at foam sta. #2 & 3. Will need 10' of 4" sched 80 pipe for station TAPS.
- 82'
- C. Remove and replace ~~app. 100'~~ of 8" sched 80 pipe on the foam system at sta. # 1, 5, 8, 9. Will need 20' of 4" sched 80 pipe for station TAPS.
- 32' 7'
- D. Replace ~~approximately 25'~~ of 5" and ~~5'~~ of 4" sched 80 steel pipe on the fire system. The section to be replaced is where fire station #8 is tapped off.
- 42' 12'
- E. Replace ~~app. 50'~~ of 8" and ~~10'~~ feet of 4" sched 80 steel pipe on the fire system. The sections to be replaced are where fire stations #9 & #10 are tapped off.
- 5 4
- F. Disconnect ~~5~~ ea. 10 ft. sections of 8" pipe and ~~3~~ ea. 10 ft. sections of 5" pipe on foam and fire systems. Blast to near white and coat according to paint schedule. ~~Sections to be replaced will be designated by the Chief Mate. SEE ATTACHED SKETCHES.~~
- G. Upon completion of work, system to be pressure tested for tightness of joints and welds. Piping in house and machinery spaces to be isolated by blanking.

17

Pipe hangers will require approx ~~25~~ ea x 8"
43 ea x 6"
23 ea x 4"
76 ea x 5"

Exhibit 1-2(b)
SAMPLE SWM SPECIFICATION MARK-UP

necessary to validate SWM findings. SWM personnel will work with EXXON personnel to refine the work package to reflect the actual scope of work to be accomplished. SWM is prepared to further support the effort by accomplishing the specification revisions and preparing the final negotiation specifications. This would necessitate EXXON supplying SWM with their specification development software.

Lessons Learned

Following shipcheck and submission of the revised specifications for EXXON review, EXXON will be invited to participate in the pilot program's first "Lessons Learned" conference to discuss the initial NEW ORLEANS advance planning efforts. Problem areas encountered during performance of the NEW ORLEANS CFI review, shipchecks, and specification revision tasks will be discussed and resolved, with improved processes implemented for the just-starting EXXON JAMESTOWN advance planning effort.

Negotiate Baseline Package

Upon receipt of the revised specification package, SWM estimators will develop an estimate for accomplishing the scope of work. That estimate will then be used to negotiate the baseline NEW ORLEANS availability, and establish pricing agreements for any emergent work identified after start of the production period.

Develop Production Schedule

Working with the negotiated specification package, the performance dates, and any customer provided milestones, SWM planning personnel will develop a production schedule for all baseline NEW ORLEANS work. Exhibit 1-3 provides a sample production schedule in the Gantt format. The production schedule will list all work items in the contract, including planned start and completion dates, activity duration, responsibility codes, and as the job progresses, percent complete. The level of detail will vary dependent on the criticality/complexity of the work. Critical material deliveries, quality check points, tests, and other in-process activities will also be displayed. Special emphasis will be placed on removing as much equipment as possible from the ship and performing shop repairs vice in-place repairs, in order to minimize shipboard workspace congestion and other inefficiencies. The production schedule will be "front-loaded" to accomplish those "open and inspect" type tasks that could not be performed during shipchecks, identify any additional work which must be performed, and complete it during the production period.

Order/Receive Baseline Material

As soon as the baseline package is negotiated and approved, SWM material planning personnel will identify and order all materials required to accomplish the identified scope of work. As material is received, it will be staged for incremental installation in accordance with the production schedule. Materials needed for prefabrication activities will be ordered on a priority basis. Due to the relatively short production period, SWM will endeavor to have all material except longlead time material received and staged prior to start of the production period. SWM also anticipates that all EXXON supplied material and equipment will be available at start of the production period.

Shipcheck For Emergent Work

Exhibit 1-3
SAMPLE Production Schedule

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Approximately 45 days before start of production, SWM personnel will perform another shipcheck in conjunction with EXXON personnel to identify and scope any additional work for inclusion into the baseline work package. This final shipcheck will permit the integration of this work into the production schedule, allowing SWM to order and stage material, and allocate personnel to preclude additional expenses due to last-minute material expediting, overtime requirements, and disruption.

Modify/Submit Emergent Specifications

Work identified during the final shipcheck will be incorporated into the work package by either modifying existing baseline specs to include additional work, or developing new specifications to scope the additional tasking. SWM is prepared to perform the specification development for emergent work, if tasked. The revised/new specifications will be submitted to EXXON for review and inclusion in the workpackage.

Negotiate Emergent Work

Work identified and written up during the final shipcheck will be negotiated in accordance with the negotiated procurement pricing agreements. Any work identified subsequent to these negotiations might be subject to a higher rate structure dependent on timing and production impact. These negotiations should complete no later than 30 days prior to start of availability in order to incorporate the work into the production schedule, order material, and allocate manpower.

Commence Prefab

Exhibit 1-1 displays a prefab period commencing 30 days prior to the production period. The actual prefab period would depend on the extent of prefab which could be economically performed prior to the ships arrival. Prefab for extensive alterations could begin as soon as the baseline work package is negotiated, assuming that drawings, etc. are readily available. SWM routinely prefabricates and palletizes foundations, mounting brackets, pipe hangers, and other "stock" pieces. For the EXXON program, SWM will utilize shipchecks to determine piping run lengths, verify structural dimensions, and target equipment in order to prefabricate to the greatest extent possible; thus allowing more time in the production period to assimilate any growth or deliver the ship early.

Order Emergent Material

The process for this task is the same as described previously for baseline material, with the exception that due to the relatively short procurement time available, some material may have to be expedited and some changes may have to be made to the production schedule in order to anticipate mid-production-period material deliveries.

Production Period

The efforts expended during the advance planning phase should yield a trouble-free production period for both "Partners in Repair". Responsibility for the production period will be vested in a small group of experienced managers empowered to commit any SWM resources necessary to meet program objectives. The constant interaction of EXXON and SWM personnel during the advance planning process will ensure that all personnel are "up to speed" on program issues and communications channels are open. All known work will have been scheduled and sequenced to make optimum use of the production period. The disruption and confusion resulting from massive last-minute changes made after the ship entered the yards and the actual scope of work was identified,

will be eliminated. Work package growth should be minimal, being primarily centered on "open and inspect" type work. All material will have been ordered, with most of it received and staged before ship arrival. Prefabricated components will be palletized and ready for installation. The manpower on hand will match the quantity and skill mix requirements of the job, instead of having to be manipulated to accommodate the deletion or addition of work. Since SWM craftspeople have shipchecked the vessel at least once, they will be familiar with the shipboard systems, the exact location of the work to be performed, and the ship's crew; thus eliminating numerous potential start of availability delays. The production period should end with the on-time or early redelivery of NEW ORLEANS in a heightened state of repair.

Lessons Learned

The final lessons learned conference for the NEW ORLEANS availability will center on material, planning, and production processes that either worked well or need to be improved. SWM and EXXON personnel will use these lessons learned to enhance the efforts being expended on the JAMESTOWN.

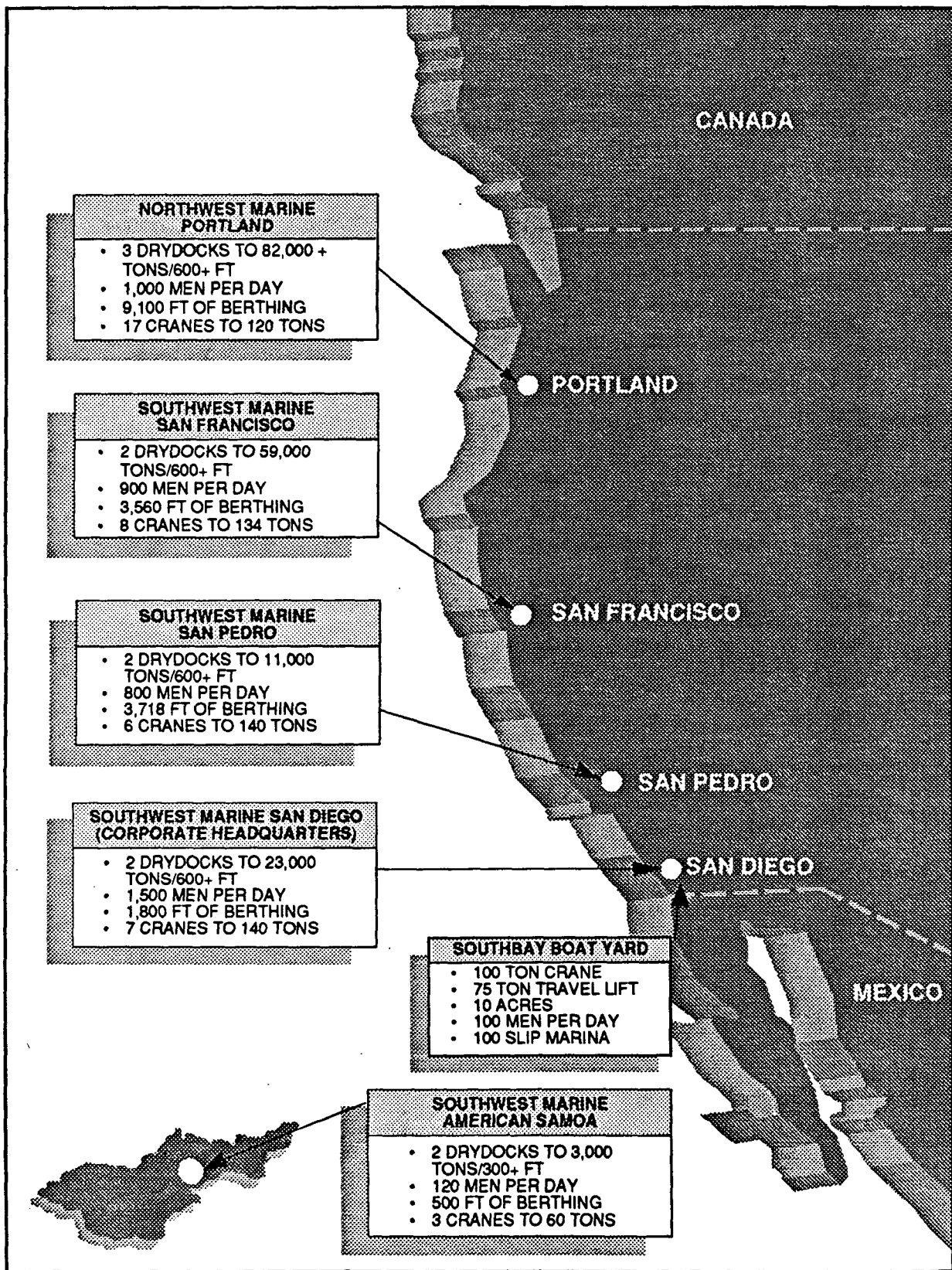
1.1.2 EXXON JAMESTOWN

All activities for the NEW ORLEANS availability will be repeated for the JAMESTOWN. The only exception will be the timeframes for accomplishing the various tasks, since more time will be available to plan JAMESTOWN. It is anticipated that due to the additional time available, and working relationships established between EXXON and SWM personnel, SWM will be allowed to provide even more assistance in the advance planning stages of the JAMESTOWN availability.

1.1.3 REVIEW PILOT PROGRAM

Following completion of the JAMESTOWN availability and its lessons learned conference, A meeting would be held between EXXON and SWM to review the success of the program. SWM projects that significant savings and performance improvements will be achieved by both "Partners in Repair". SWM is confident that any EXXON ships placed in this program will be in a better state of repair at a lower repair dollar ratio by program end.

Exhibit 2-1
Southwest Marine, Inc. Division Locations



2.0 MANAGEMENT CAPABILITY AND APPROACH

2.1 Management Capability

Southwest Marine, Inc. (SWM) was founded in 1977 by Arthur E. Engel because he was not satisfied with the level of service and quality being provided by other shipyards. His success-follows-quality approach to ship repair was proven as SWM continuously expanded to meet increasing customer workloads. Today, SWM is the largest owner-operated ship repair firm in the U.S., with full service shipyards strategically located in Portland, Oregon; San Francisco, San Pedro, and San Diego, California; and American Samoa; as well as several marine subsidiaries providing small boat repair, heavy-lift crane, and passenger ferry/tourist cruise services. Exhibit 2-1 provides an overview of SWM's major West Coast facilities.

SWM's ability to expand capabilities in a market generally considered to be "on-the-decline" in this country is due to a combination of vision and management capability. SWM has consistently explored new management and production techniques and actively seeks new and greater challenges. This willingness to risk has allowed SWM to embrace new management techniques and production technologies which increase customer satisfaction, product quality, cost efficiency, and profit.

SWM's management capabilities have supported virtually every type of commercial and military vessel repair and conversion availability, ranging in scope from the drydocking and repair of the company's own fleet of ferries, barges, and tour boats to the recent design, fabrication and installation of a new bow, sky lounge, ducktail sponsons, and over two hundred passenger cabins aboard M/S VIKING SERENADE. SWM personnel and management capabilities have also supported successful yard periods on numerous liquid, bulk, and container vessels owned by EXXON, Shell Oil/Marine Transport Lines, Keystone, West Coast Shipping, Matson Lines, PEMEX and Holland America Lines; among others.

Programs similar to the proposed EXXON-SWM "Partners in Repair" concept have already been implemented to meet the ongoing repair, maintenance, and modernization needs of West Coast Shipping, Shell Oil/Marine Transport Lines, and Holland-America Lines.

2.1.1 Crafting Quality Environments

SWM's unique position as both a customer and supplier for marine repair services has enhanced SWM's awareness of the needs and responsibilities of both the ship owner and the shipyard in the repair cycle. This awareness is displayed by the company's commitment to the use of Total Quality Management (TQM) techniques for the continuous improvement of both management and production processes. SWM's program, called "Crafting Quality Environments", emphasizes the importance of all participants in each program as both customers and suppliers. Briefly stated, a customer is a receiver, and a supplier is a provider. In ship repair, the ship owner/operator is not only a customer receiving repair services for their ship, but also a supplier, since they provide the shipyard with the object for repair (the ship) and the scope of work which they desire to have performed (the specifications). The success of any ship repair period is as much dependent on the quality and timeliness of the customer's input as it is on the quality and timeliness of the shipyard's services.

Through execution of several Phased Maintenance Programs (PMPs) on Navy ships, SWM has learned that when there is both customer and shipyard involvement with all aspects of the repair cycle from the identification of needed repairs through the final lessons learned conference, it is easier to communicate exactly what the customer needs done and exactly what the shipyard needs to do to accomplish it. Upfront involvement and communication permit both the customer and the shipyard to reach agreement on the scope, schedule, and cost of work. The end result is that the customer enters the shipyard with a clear picture of what is to be done, how long it will take to do it, and how much it will cost.

"Partners in Repair"

The commercial ship repair market currently puts little emphasis on shipyard involvement with advance planning. Generic specifications are written, bid requests ask for "unit prices", and the overall scope of work may increase or decrease dramatically after the ship arrives and the actual scope of work is identified. This approach often leads to extended yard periods, poor quality work, and higher repair costs for the customer. It also puts enormous strain on shipyard resources as material, manpower, and facilities utilization plans are disrupted. All of these problems are avoidable if both the customer and the shipyard get involved with the process at the beginning, communicate needs and concerns, and reach agreement as to the scope of work; time and resources needed to accomplish it; and how much it will cost. SWM would like to apply the previously discussed phased maintenance/advance planning concepts to commercial ship repair. The "Partners in Repair" program would adapt those concepts to EXXON's specific maintenance and repair needs. This is the basis for SWM's proposal that EXXON and SWM become "Partners in Repair."

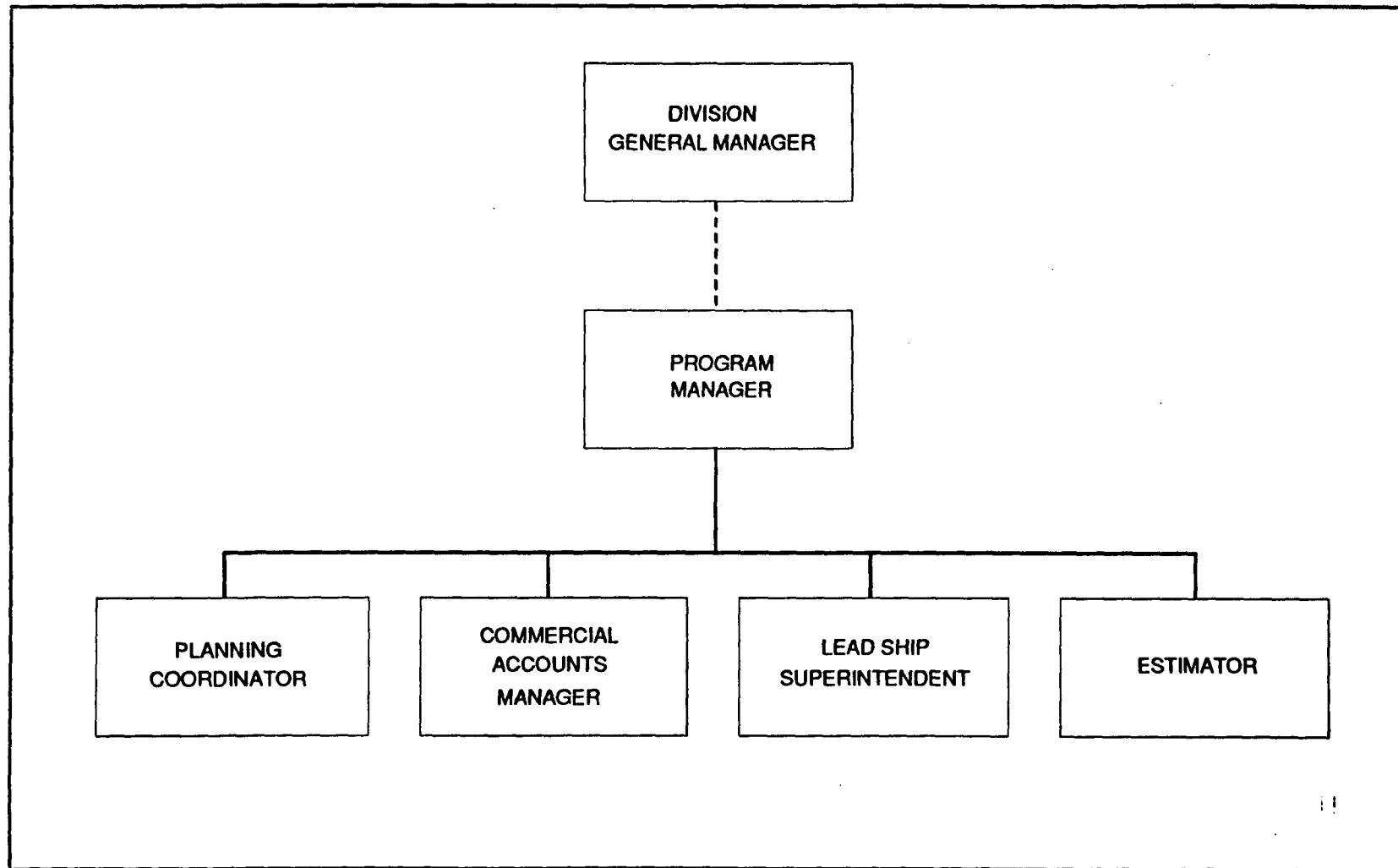
2.2 Management Approach

SWM's management approach to the "Partners in Repair" program includes getting EXXON involved with the concept, discussion of EXXON's and SWM's needs and goals in the repair cycle, and coming to a mutually beneficial agreement on how to meet those goals. Upon reaching consensus, SWM will assign a dedicated program management organization (PMO) to administer the agreement and ensure that EXXON and SWM goals are achieved.

The primary contractual vehicle for the "Partners in Repair" program would be a negotiated procurement for each ship included in the pilot program. EXXON and SWM would "agree to agree" when the program is put into place and negotiate the scope of work identified through joint EXXON-SWM actions during the advance planning period.

Once EXXON and SWM have agreed to the "Partners in Repair" concept, and established any guidelines for the pilot program, SWM will assign the PMO. The PMO approach is used by SWM to manage large scale and complex programs for both Navy PMPs and commercial ship availabilities. The PMO approach focuses authority and responsibility for the program on a team of experienced managers empowered to direct division management and production efforts and allocate personnel and facilities resources to achieve program goals. Exhibit 2.2 displays the proposed PMO for the pilot program. The organization structure avoids the "stove pipe" approach to project management and, instead, promotes interaction of the various program disciplines. All members of this team will be dedicated to the pilot program and, in order to take the greatest advantage of lessons learned, will manage both the NEW ORLEANS and JAMESTOWN availabilities.

Exhibit 2-2
EXXON-SWM "Partners in Repair" Pilot Program
Program Management Organization



The **Program Manager** will be responsible to the general manager for all aspects of the "Partners in Repair" pilot program, and will be the primary management-level point of contact with EXXON for all matters concerning this effort. The program manager will direct the efforts of all PMO personnel, and will be authorized to represent and commit SWM contractually. Due to the importance of the program to both parties, and the need to establish excellent communications at the outset of the program, EXXON will be asked to participate in the selection of the program manager from SWM's highly qualified management staff.

The **Planning Coordinator** will be responsible to the program manager for the accurate and timely completion of all advance planning and scheduling tasks, including specification review, shipchecks, specification/drawing development, engineering liason, and material and production schedule development. During each availability, the planning coordinator will be responsible for progressing the production effort via twice-weekly schedule updates. The planning coordinator will be authorized to draw on any division level support required to meet advance planning commitments.

The **Commercial Accounts Manager (CAM)** will be responsible to the program manager for the day-to-day coordination of all program activities. The commercial accounts manager will be the primary point of contact for routine contract negotiations as well as interface with EXXON engineering personnel, and will be authorized to represent the program manager in his absence. As with the program manager, EXXON will be invited to participate in the selection of the CAM for this pilot program.

The **Lead Ship Superintendent** will be responsible to the project manager for the timeliness, quality, and cost effectiveness of the shipboard production effort. They will interface with the CAM on engineering matters, and will be empowered to direct the efforts of all SWM crafts and subcontractors in achieving program goals.

The **Estimator** will be responsible to the project manager for the preperation of baseline and emergent work estimates for the pilot program. They will work with the CAM to quantify and negotiate work scope. The estimator will be authorized to draw on division level estimating resources to perform assgined tasks.

SWM will supply **Support Personnel** to the PMO from all shipyard departments on an as-requested basis. SWM employs specialists in engineering, naval architecture, CAD, drafting, technical documentation, specification writing, and material management; and will apply these resources to the "Partners in Repair" program at EXXON's request. Tasks which SWM is prepared to assume for EXXON include specification development; preliminary, installation, and as-built drawing development (manual or CAD); material procurement, and stability calculations. In fact, should the opportunity present itself, SWM is prepared to provided EXXON with a complete turn-key advance planning effort from scoping of the baseline work, to development of the final work package and associated technical documents.

2.3 Management Techniques

In addition to the usual array of graphs, schedules, charts, and reports used by all shipyards to guage progress and management capability, SWM has committed to improving the workplace environment, improving product quality, lowering customer costs, and increasing profit margins by streamlining processes, enhancing internal and external communication channels, and encouraging both the employee and the customer to participate more fully in the entire repair process.

As previously stated, SWM is an advocate of the Total Quality Management (TQM) approach to improving workplace and product quality. SWM has implemented several programs designed to promote involvement, communication, and agreement with both the customer and SWM employees. In addition to Crafting Quality Environments, SWM's internal TQM program, SWM also supports the Ritchie Program, aimed at increasing productivity and accountability at the deckplate levels, and the Operational Awareness Program aimed at improving product flow via enhanced communication throughout the planning and production cycles. These programs are all focused on improving the processes which produce the final product. SWM has traditionally produced a quality product. However, SWM now recognizes that the processes involved were cumbersome and expensive, leading to increased costs and less than desirable productivity levels. The processes were not all internal, either. Many process problems emanate for the traditional ship owner/shipyard relationships. A major SWM goal, as evidenced by "Partners in Repair" and projects with other ship owner/operators, is to identify and improve those customer/supplier processes which have, in the past, cost SWM and its customers time, quality, money, and satisfaction. Working together to improve the entire ship repair and maintenance process will benefit both EXXON and SWM. EXXON will get better service, a higher state of repair for its ships, and a better return on its repair dollar. SWM will be able to maintain a more stable workload, make a reasonable profit, and continue the ongoing process of improvement.

3.0 RESOURCES

Southwest Marine, Inc. (SWM) maintains all resources, including the facilities, personnel, and experience required to fully support the proposed "Partners in Repair" program.

SWM offers EXXON the most comprehensive ship repair facilities on the West Coast. Those facilities include four full service shipyards located in major commercial shipping ports. Combined, these facilities offer EXXON access to 11 marine railways and drydocks with lifting capacity ranging to over 82,000 tons; over 18,000 feet of deep water berthing; gantry, portable and floating cranes to 150 tons; the full range of temporary services; and fully outfitted shops capable of fabricating anything from the smallest bracket to entire ships bows and missile launching modules. Exhibit 3-1 provides an overview of each SWM division's major facility assets.

SWM offers EXXON the largest pool of ship repair talent available on the West Coast. SWM employs a highly skilled and mobile workforce averaging 4,000 men-per-day. SWM can supply any marine support skill needed ranging from laborers to nuclear propulsion specialists. SWM's craftsmen have fabricated and installed liquid cargo transfer systems, stability sponsons, firefighting systems, fireroom ventilation systems, entire bow and stern sections, and weapons suites. SWM's management staff has planned, directed, and negotiated literally hundreds of contracts ranging in scope from the most routine "shave and haircut" to highly complex conversion programs with labor budgets in excess of one million manhours.

Exxon will receive the same high levels of ship repair expertise wherever an EXXON ship needs repair. All SWM personnel, regardless of division, work in accordance with the same company guidelines and procedures. This provides SWM with the unique capability for inter-company transfer of skilled personnel and proven repair techniques. SWM's multiple yard configuration allows different facilities to develop expertise in different areas of ship repair dependent on the customer support base for that facility's location. SWM's Portland and San Francisco facilities primarily support commercial ship repair, while San Diego and San Pedro's proximity to major Navy installations has caused them to develop great expertise in Navy ship repair. However, the VIKING SERENADE, the most complex cruise ship conversion ever accomplished by a US shipyard, was performed in San Diego, with all SWM divisions participating. Portland built the new bow and stern sections. San Diego built the stack-mounted lounge and disco and directed all production efforts, using management and production personnel drawn from the other three divisions for their specific expertise. Conversely, the Portland division recently completed a major year-long overhaul of USS William H. Standley. SWM transferred personnel and lessons-learned from the San Diego division to Portland to support this successful guided missile cruiser overhaul. SWM also maintains the portable tools and equipment to send work crews anywhere in the world where EXXON ships need repair.

SWM has the relevant experience needed to support any EXXON repair requirement. All SWM divisions have supported repairs to liquid cargo tankers and maintain capability to support any type of repairs or alterations to tanker systems. SWM's Portland, San Francisco, and San Pedro divisions have specific experience in the overhaul and repair of EXXON ships.

The following subsections provide an overview of each SWM division's facilities, shops, personnel, and experience.

**Exhibit 3-1
Facility Capacities of Southwest Marine
Division Shipyards**

| LOCATION | SIZE | DRY DOCKS | PIER SPACE | CRANE SERVICE |
|---|----------|--|-------------------------------------|---|
| NORTHWEST MARINE PORTLAND DIVISION | 20 ACRES | 3 DRY DOCKS DRYDOCK NO. 1: 15,238 TONS, 597' LOA BY 88' WIDE DRY DOCK NO. 3: 27,428 TONS, 659' LOA BY 114' WIDE DRYDOCK NO. 4: 82,198 TONS, 981' LOA BY 185' WIDE | 10,102 FEET OF BERTHING SPACE | 16 CRANES WITH CAPACITIES TO 120 TONS |
| SAN FRANCISCO DIVISION | 14 ACRES | 2 DRY DOCKS DRYDOCK NO. 1: 1,800 TONS, 853' LOA BY 100' WIDE DRY DOCK NO. 2: 65,473 TONS, 899' LOA BY 150' WIDE | 3560 FEET OF BERTHING SPACE | 8 CRANES WITH CAPACITIES TO 134 TONS |
| SAN PEDRO DIVISION | 14 ACRES | 2 DRY DOCKS DRY DOCK NO. 1: 50,000 TONS, 656' LOA BY 98' WIDE DRY DOCK NO. 2: 2,540 TONS, 250' LOA BY 111' WIDE | 3717 FEET OF BERTHING SPACE | 6 CRANES WITH CAPACITIES TO 140 TONS |
| SAN DIEGO DIVISION | 9 ACRES | 2 DRY DOCKS DRY DOCK NO. 3: 20,860 TONS, 576' LOA BY 108' WIDE DRY DOCK NO. 4: 3,829 TONS, 397' LOA BY 111' WIDE | 1798 FEET OF BERTHING SPACE | 7 CRANES WITH CAPACITIES TO 150 TONS |

3.1 PORTLAND DIVISION

The Portland, Oregon division, Northwest Marine (NWM), is on the Willamette River, at the Portland Ship Repair Yard (PSRY). NWM maintains its own production shops and administrative areas, but leases drydock and pier space from the PSRY. Exhibit 3.1-1 displays an overview of the NWM/PSRY facility, which has three drydocks to over 82,000 tons, crane service to 120 tons, and full temporary services support. Exhibit 3.1-2 displays the major shop equipment available to support the program. Exhibit 3.1-3 displays the current production manpower for NWM. The extensive transportation fleet of trucks, buses, mobile offices, and other portable support equipment maintained at all Southwest Marine divisions is particularly important to NWM since it allows that division to support pierside repair programs in the Seattle area, which is only a three hour drive from Portland.

The Portland division has accomplished repairs on the following Exxon vessels:

- Exxon Benicia
- Exxon Galveston
- Exxon Jamestown
- Exxon North Slope
- Exxon New Orleans
- Exxon Philadelphia
- Exxon San Francisco
- Exxon Baton Rouge.

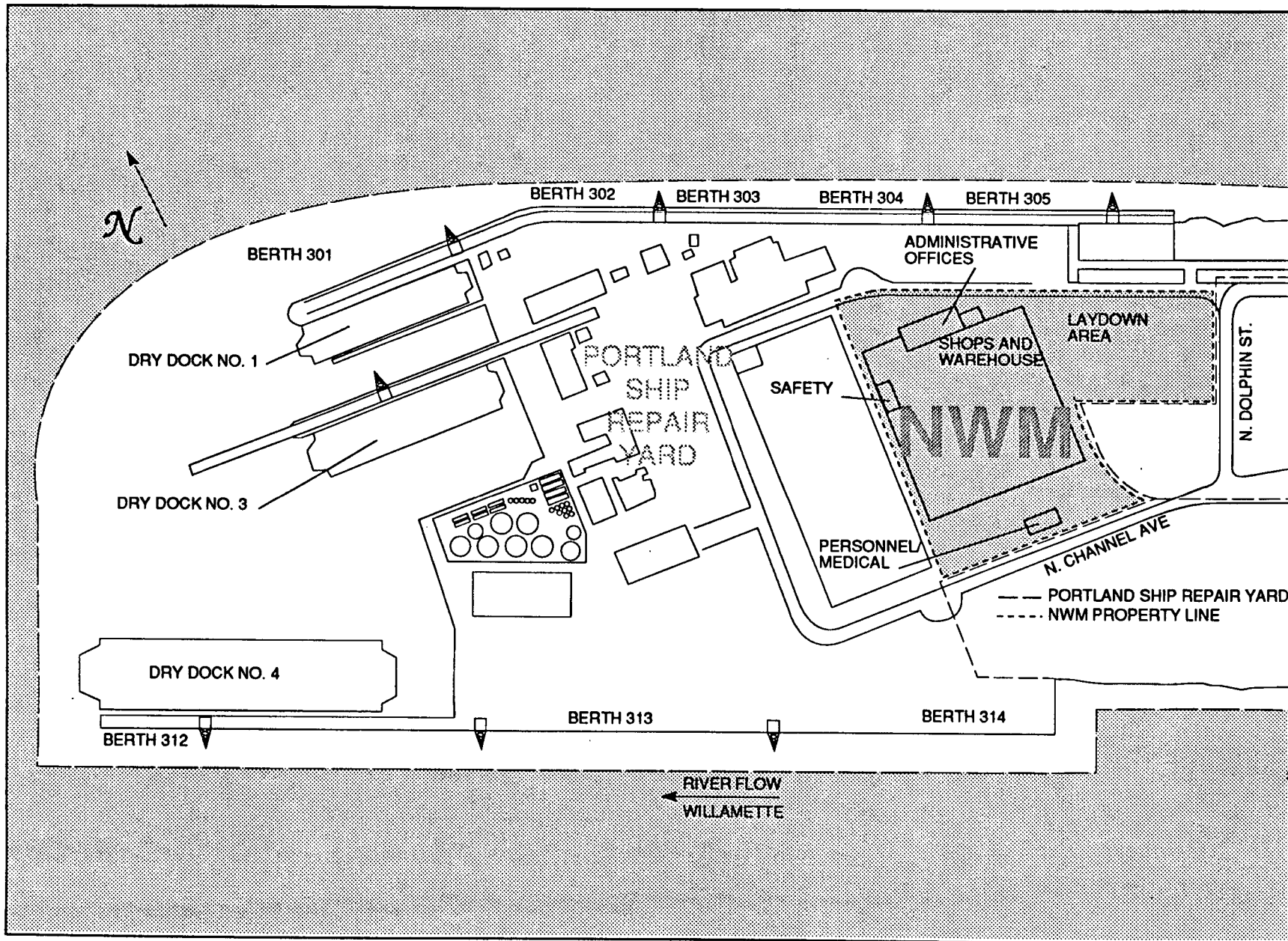


Exhibit 3.1-1
Portland Division (NWM)

SOUTHWEST MARINE, INC.

Exhibit 3.1-2(1)
Portland Shop Equipment

| MACHINE SHOP | | PIPE SHOP | |
|---|--|---|--|
| <u>SHOP SIZE</u> | <u>CRANES</u> | <u>SHOP SIZE</u> | <u>CRANES</u> |
| 30,000 SQ FT | 3-5 TON OVERHEAD BRIDGE CRANES 1-20 TON OVERHEAD BRIDGE CRANE 14-2 TON, 2-5 TON JIB BOOMS | 30,000 SQ FT | 1-5 TON OVERHEAD BRIDGE CRANE 1-10 TON OVERHEAD BRIDGE CRANE 5-2 TON JIB BOOMS |
| <u>STORAGE</u> | | <u>STORAGE</u> | |
| (1) TOOLS | (1) 2,300 SQ FT AND 192 SQ FT PORTABLE TRAILER | (1) TOOLS | (1) 1,440 SQ FT AND 192 SQ FT PORTABLE TRAILER |
| (2) MATERIAL | (2) 5,170 SQ FT | (2) MATERIAL | (2) 2,764 SQ FT |
| <u>LAYDOWN AREA</u> | 3,000 SQ FT OF BREEZEWAY AND 5,000 SQ FT OF SHOP FLOOR | <u>LAYDOWN AREA</u> | 6,000 SQ FT OF BREEZEWAY AND 5,000 SQ FT OF SHOP FLOOR |
| <u>MAJOR MACHINERY</u> | | <u>MAJOR MACHINERY</u> | |
| 1 EA. STEP TOE SHAPER | | 1 EA. RIGID 535 THREADER | |
| 1 EA. RADIAL DRILLS | | 1 EA. RIGID 444 THREADER | |
| 1 EA. PLAIN MILL | | 1 EA. OSTER THREADER | |
| 1 EA. BRIDGEPORT MILL | | 1 EA. TILTING ARM BAND SAW | |
| 1 EA. LATHES | | 1 EA. ABRASIVE CUT-OFF | |
| 1 EA. NIBBLER | | 1 EA. BENCH GRINDER | |
| 1 EA. HORIZONTAL BORING MILL | | 1 EA. BENCH BUFFER | |
| 1 EA. HARD SEAT SURFACE GRINDER | | 2 EA. ENERPAC BENDER | |
| 1 EA. VALVE TEST BENCH TO 2" 3000 PSI | | 1 EA. ZERO PEEN SANDBLASTER | |
| 1 EA. VALVE TEST BENCH TO 2"-30" 1600 PSI | | 1 EA. WELDING POSITIONERS: 300, 2500, AND 3000 LB. CAP. | |
| 1 EA. HYDRAULIC PRESS | | 1 EA. TURNING ROLLS 2000 LB. CAP. | |
| 1 EA. PEDESTAL GRINDER | | 1 EA. PANAJIRIS WELDING POSITIONER | |
| 1 EA. FRICTION CUT-OFF SAW | | 1 EA. TITANIUM WELDING BOOTH | |
| 1 EA. METAL BAND SAW | | 1 EA. HELIASIC WELDER | |
| 1 EA. 7" CARBIDE TOOL GRINDER | | 1 EA. PLASMA CUTTING EQUIPMENT | |
| 1 EA. 6" BENCH GRINDER | | 1 EA. 3000 PSIG HYDRO TEST STAND | |
| 1 EA. 3 STAGE HYDRAULIC FLUSHING AND TESTING UNIT | | | |
| 1 EA. DRILL SHARPENER | | | |
| 1 EA. TOOL GRINDER | | | |
| <u>TEST EQUIPMENT</u> | | <u>TEST EQUIPMENT</u> | |
| (1) FACILITIES | ENVIRONMENTALLY CONTROLLED CALIBRATION LABORATORY CONFIGURED TO NATIONAL BUREAU OF STANDARDS REQUIREMENTS | (1) FACILITIES | EIGHT WELDER CERTIFICATION TEST BOOTHS. ONE 3000 PSIG HYDRO TEST STAND. |
| (2) SPECIAL | VALVE TEST STAND TO 30" @ 1500 PSI. PUMP TEST STAND WITH CERTIFIED POWER SUPPLY. 1000 GPM CAPACITY FOR ANY MEDIUM, CALIBRATED FLOW TANKS | | |
| STRUCTURAL SHOP | | STRUCTURAL SHOP | |
| <u>SHOP SIZE</u> | <u>CRANES</u> | <u>SHOP SIZE</u> | <u>CRANES</u> |
| 45,000 SQ FT | 2-20 TON OVERHEAD BRIDGE CRANES | | |
| <u>STORAGE</u> | | <u>STORAGE</u> | |
| (1) TOOLS | (1) 2,300 SQ FT | (1) TOOLS | (1) 2,300 SQ FT |
| (2) MATERIAL | (2) 600 SQ FT | (2) MATERIAL | (2) 600 SQ FT |
| <u>LAYDOWN AREA</u> | EIGHT ACRES ADJACENT TO BAY AND 5,000 SQ FT OF SHOP FLOOR | <u>LAYDOWN AREA</u> | EIGHT ACRES ADJACENT TO BAY AND 5,000 SQ FT OF SHOP FLOOR |
| <u>MAJOR MACHINERY</u> | | <u>MAJOR MACHINERY</u> | |
| 1 EA. AUDIOGAUGING EQUIPMENT | | 1 EA. DRILL PRESS | |
| 1 EA. 8"X10" BENCH GRINDERS | | 1 EA. PRESS | |
| 1 EA. BURNING MACHINES | | 1 EA. VAC-U LIFT MACHINES | |
| 1 EA. 20' PLATE ROLL | | 1 EA. 300 AMP SHORT ARC WELDER | |
| 1 EA. HOLE PUNCH | | 1 EA. BAND SAWS | |
| 1 EA. ALUMINUM WELDERS | | 1 EA. SUB-ARC WELDERS | |
| 1 EA. DOODLEBUG | | 1 EA. 1500 TON 30' PRESS BRAKE | |
| 1 EA. 20' SHEAR | | | |

Exhibit 3.1-2(2)
Portland Shop Equipment

| ELECTRICAL SHOP | | SHEETMETAL SHOP | |
|------------------------------|---|--|---|
| <u>SHOP SIZE</u> | <u>CRANES</u> | <u>SHOP SIZE</u> | <u>CRANES</u> |
| 15,000 SQ FT | 1-10 TON OVERHEAD BRIDGE CRANE 1-5 TON OVERHEAD CRANE | 15,000 SQ FT | 1 OVERHEAD BRIDGE CRANE |
| <u>STORAGE</u> | | <u>STORAGE</u> | |
| (1) TOOLS | (1) 2,000 SQ FT (ENCLOSED/LOCKABLE) | (1) TOOLS | (1) 700 SQ FT (ENCLOSED/LOCKABLE) |
| (2) MATERIALS | (2) 2,325 SQ FT (ENCLOSED/LOCKABLE) | (2) MATERIAL | (2) 300 SQ FT (ENCLOSED/LOCKABLE) |
| <u>LAYDOWN AREA</u> | 3,000 SQ FT OF BREEZEWAY AND 3,000 SQ FT OF SHOP FLOOR | <u>LAYDOWN AREA</u> | 3,000 SQ FT OF BREEZEWAY AND 3,000 SQ FT OF SHOP FLOOR |
| <u>MAJOR MACHINERY</u> | | <u>MAJOR MACHINERY</u> | |
| 1 EA. ADDRESSOGRAPH MACHINE | | 1 EA. 600 AMP WELDERS | |
| 1 EA. AC DC MG TEST PANEL | | 1 EA. 35 TO 460 AMP MIG WELDER | |
| 1 EA. GRINDERS | | 1 EA. PA-3A WIRE FEED | |
| 1 EA. WELSAW BAND SAW | | 1 EA. MIDGET WIRE FEED | |
| 1 EA. MILLER WELDER 400 AMP | | 1 EA. PORTABLE MIG WELDER | |
| 1 EA. DISPATCH OVEN | | 1 EA. MUBBA IRON MARKER | |
| 1 EA. ROOVERS TAPE WRITER | | 1 EA. 12 X 200 TON PRESS | |
| 1 EA. DRILL PRESSES | | 1 EA. 1/4" X 10' SHEAR | |
| 1 EA. TRINCO DRY BLASTER | | 1 EA. METAL BAND SAW | |
| 1 EA. CROSS CUT SAW | | 1 EA. 1/2" BENCH DRILLS | |
| 1 EA. OXYGEN/ACETYLENE TANKS | | 1 EA. 1/2" STANDING DRILL | |
| 1 EA. RIGID PIPE THREADER | | 1 EA. FLANGE PUNCH | |
| 2 EA. 2000 KW SALT BOX | | 1 EA. 54" POWER ROLL | |
| <u>TEST EQUIPMENT</u> | | <u>TEST EQUIPMENT</u> | |
| (1) FACILITIES | ELECTRONIC TEST BENCHES WITH AC/DC POWER SUPPLY. TWO 2,000 KW SALT BOXES | 1 EA. 34" HAND ROLL | |
| (2) SPECIAL | 1,500 SQ FT CONTROLLER OVERHAUL FACILITY BAKE OVENS | 1 EA. 26" HAND ROLL | |
| | | 1 EA. NIBBLER | |
| | | 1 EA. SPOT WELDER | |
| | | 1 EA. 48" BOX BRAKE | |
| | | 1 EA. GRINDERS | |
| | | 1 EA. SANDERS | |
| | | 4 EA. PLASMA CUTTERS | |
| | | SPECIAL FLOW HAND VELOMETER, CYCLOMETER, ANOMETER (ALL CALIBRATED) | |

NOTE:

- ALL LISTED MACHINERY AND SPECIAL EQUIPMENT IS PERMANENTLY OWNED BY NORTHWEST MARINE, INC.
- WORK NEEDING SPECIAL EQUIPMENT NOT OWNED BY NORTHWEST MARINE, INC. WILL BE SUBCONTRACTED OR SPECIAL TOOLS WILL BE LEASED.

Exhibit 3.1-3
Portland Division Production Manpower

| | PRODUCTION CRAFTS | | | | | | PROD * SUPPORT | TOTAL |
|---|-------------------|------|------|-------|----------------|-------|-------------------|-------|
| | STRUCT | MACH | PIPE | ELECT | SHEET METAL | OTHER | | |
| PERSONNEL CURRENTLY ON-BOARD | 226 | 48 | 114 | 69 | 120 | 182 | 98 | 857 |
| SOURCES: RECALL FROM LAYOFF | 173 | 122 | 115 | 50 | 58 | 257* | N/A | 775 |
| UNSOLICITED APPLICATIONS | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| LOCAL LABOR MARKET ** | 450 | 150 | 175 | 11 | 192 | 293* | N/A | 1,271 |
| NOTES: * INDIRECT PERSONNEL ** CURRENT INFORMATION SUPPLIED BY CALIFORNIA EMPLOYMENT DEPARTMENT | | | | | | | | |

3.2 SAN FRANCISCO DIVISION

The San Francisco division is located on the San Francisco waterfront, convenient to all marine facilities. The division has direct access to the open ocean, drydocking capabilities to 59,000 long tons, and the full range of temporary services available. Exhibit 3.2-1 displays an overview of the San Francisco facilities showing administrative, production, pier, and drydock assets. Exhibit 3.2-2 displays the major shop equipment available to support the program. Exhibit 3.2-3 displays the division's current production manpower.

SWM San Francisco has repaired the following Exxon vessels:

- Exxon Baytown.
- Exxon California
- Exxon Baton Rouge
- Exxon Yorktown
- Exxon North Slope
- Exxon Carquinez
- Exxon Long Beach
- Exxon Philadelphia
- Tug and Barge-502.

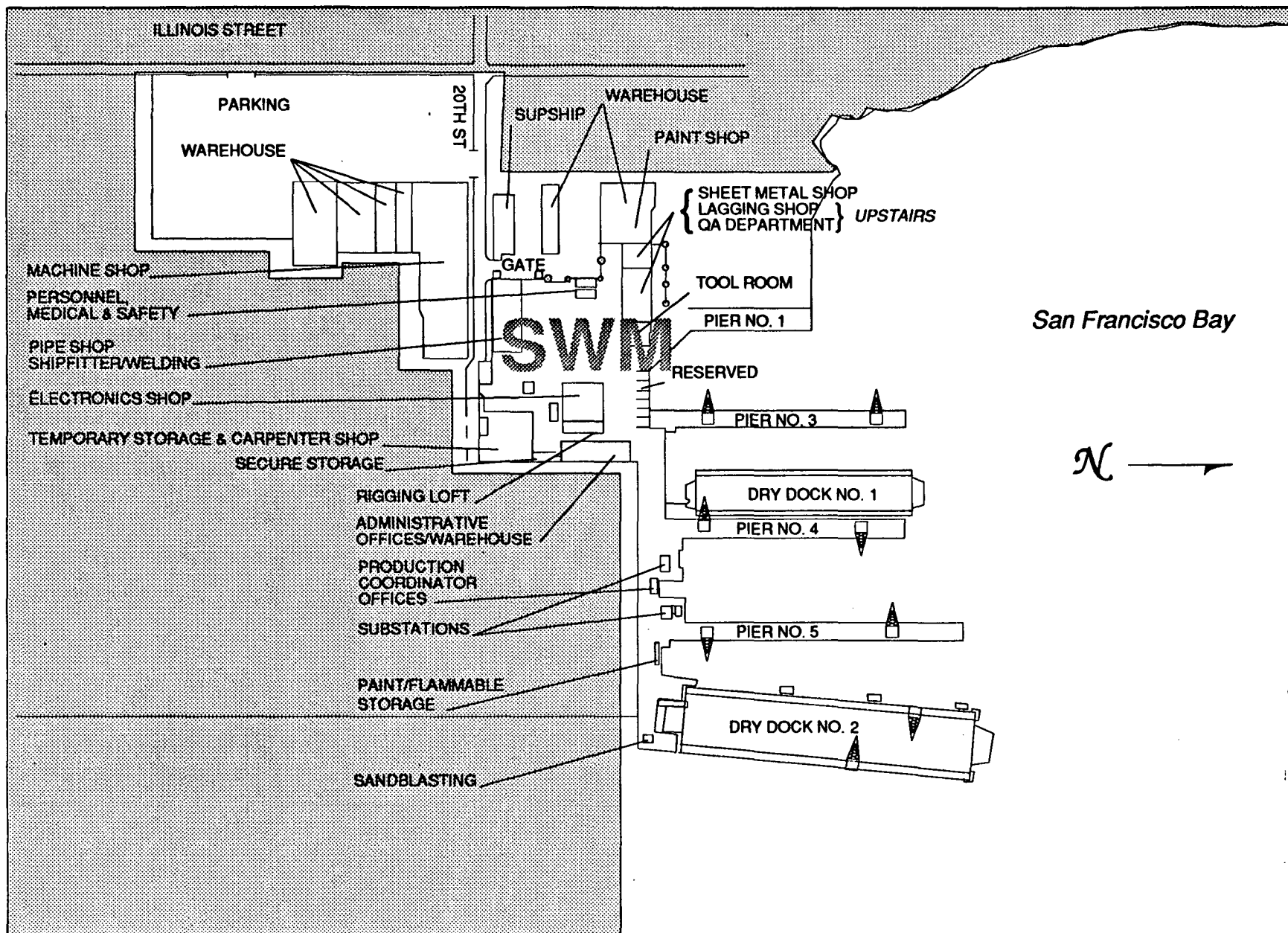


Exhibit 3.2-1
San Francisco Division

SOUTHWEST MARINE, INC.

Exhibit 3.2-2
San Francisco Production Shops

MACHINE SHOPSHOP SIZE CRANES

23,100 SQ. FT. 4-8 TON
 2-20 TON
 2-30 TON

MAJOR MACHINERY

1 EA. GRAY OPENSIDE PLANER 96" X 108 X 30"
 1 EA. GRAY OPENSIDE PLANER 48" X 48" X 16"
 1 EA. 10" RADIAL DRILL
 1 EA. 6" RADIAL DRILL
 1 EA. 7" HORIZONTAL BORING MILL
 2 EA. 62" VERTICAL BORING MILL
 2 EA. 100" VERTICAL BORING MILL
 2 EA. 48" X 76" ENGINE LATHE
 1 EA. 60" X 48" HEAVY DUTY ENGINE LATHE
 1 EA. 60" X 30" HEAVY DUTY ENGINE LATHE
 1 EA. 72" DRAW CUT PLANNER
 1 EA. 30" VERTICAL TURNING AND BORING TOOL
 3 EA. VARIABLE HORIZONTAL BORING MILL
 1 EA. 6' X 14' PLANNER-MILLER
 1 EA. 86" X 49" HEAVY DUTY ENGINE LATHE
 1 EA. 48" X 30" ENGINE LATHE
 1 EA. 48" X 30" ENGINE LATHE
 1 EA. (LOT) DRILL PRESS GRINDERS, BENCH SAWS, WELDING AND
 BURNING EQUIPMENT

PIPE SHOPSHOP SIZE CRANES

7,440 SQ FT 4-5 TON
 2-20 TON
 2-30 TON

MAJOR MACHINERY

1 EA. 100 TON HYDRAULIC PRESS
 1 EA. 10" PLATE ROLL
 1 EA. 8" HYDRAULIC PIPE BENDER
 1 EA. 6" HYDRAULIC PIPE BENDER
 1 EA. 3" HYDRAULIC PIPE BENDER
 1 EA. 2" HYDRAULIC PIPE BENDER
 1 EA. 6" THREADING MACHINE
 12 EA. 1" THREADING MACHINE
 1 EA. LEBLOND REGAL LATHE, VARIABLE SPEED
 1 EA. MARVEL BANDSAW
 1 EA. (LOT) VICES, WORK BENCHES, DRILLS,
 SANDING & GRINDING
 MACHINES, WELDING MACHINES

STRUCTURAL SHOPSHOP SIZE CRANES

19,000 SQ FT 2-7 TON
 1-20 TON

MAJOR MACHINERY

1 EA. 500 TON HYDRAULIC PLATE BENDER
 1 EA. 500 TON HYDRAULIC PRESS
 1 EA. 500 TON PLATE JOGGLER
 1 EA. 1,200 TON PRESS BRAKE
 1 EA. 40" PLATE PLANNER
 1 EA. 32" PLATE ROLLS
 1 EA. 4" RADIAL DRILL
 1 EA. 70" FLAME PLANNER
 1 LOT DRILL PRESS, SAWS GRINDERS WELDING
 & BURNING EQUIPMENT

ELECTRICAL SHOPSHOP SIZE CRANES

8,560 SQ FT

MAJOR MACHINERY

1 EA. PLATING LATHE
 1 EA. MACHINE LATHE
 1 EA. BANDSAW
 1 EA. BENCH GRINDER
 1 EA. BEAD BLASTER
 1 EA. DRILL PRESS 1/2" CAPACITY
 1 EA. 5,000 KW SALT BOX
 1 EA. 300 KW SALT BOX
 1 EA. 777MCM SALT BOX CABLE, 4,800'
 1 EA. PHOTOACHOMETER
 2 EA. VIBRATION ANALYZER
 4 EA. MEGGARS 550V
 2 EA. V.O.M. DIGITAL
 5 EA. V.O.M. SIMPSON
 3 EA. AMMETERS CLAMP-ON 0-1000 AMPS
 1 EA. AMPTRON 10:1 COIL
 6 EA. AMPROBE METERS 0-300 AMPS
 1 EA. CYCLE METER 0-450
 1 EA. HYPOT
 2 EA. STROBE-D SCOPE
 1 EA. PYROMETER 0-250° TEMP INDICATOR
 2 EA. TWIN HEAT MODULES
 2 EA. HIGH AMP SWITCHING CONTRACTS
 1 EA. HYDRAULIC PRESS
 1 EA. SOLVENT TANK
 1 EA. BEARING INDUCTION HEATER
 1 EA. SURGE TESTER
 3 EA. POWER SUPPLIES 1 AT 400.1 AT 2,000 AMP DC
 1 EA. (LOT) SMALL TOOLING METERS,
 THERMOMETERS

SHEETMETAL SHOPSHOP SIZE CRANES

12,000 SQ FT

MAJOR MACHINERY

1 EA. JERSON POWER PRESS, T-SUA
 2 EA. POWER PRESS BRAKE
 1 EA. PEDESTAL GRINDER
 3 EA. GRINDER
 1 EA. STANLEY GRINDER
 1 EA. BELT SANDER
 2 EA. BUFFALO IRON WORKER
 1 EA. WHITNEY PUNCH PRESS
 1 EA. BLISS PUNCH
 2 EA. PEXTO POWER ROLL
 1 EA. RADIAL DRILL
 1 EA. BUFFALO DRILL, NO. 15
 1 EA. BUFFALO DRILL, NO. 16
 1 EA. DRILL PRESS
 1 EA. WHITNEY MANUAL BRAKE
 1 EA. CHICAGO MANUAL BRAKE
 1 EA. PAN BRAKE
 1 EA. CLEAT BENDER
 2 EA. ROTEX PUNCH
 4 EA. MANUAL ROLL

Exhibit 3.2-3
San Francisco Division Production Manpower

| | PRODUCTION CRAFTS | | | | | | PROD * SUPPORT | TOTAL |
|--|-------------------|------|------|-------|----------------|-------|-------------------|-------|
| | STRUCT | MACH | PIPE | ELECT | SHEET METAL | OTHER | | |
| PERSONNEL CURRENTLY ON-BOARD | 118 | 74 | 46 | 25 | 13 | 143 | 42 | 461 |
| SOURCES: RECALL FROM LAYOFF | 320 | 210 | 80 | 185 | 80 | 475 | 45 | 1,395 |
| UNSOLICITED APPLICATIONS | 40 | 50 | 35 | 40 | 30 | 75 | 100 | 370 |
| LOCAL LABOR MARKET ** | 800 | 750 | 250 | 500 | 200 | 800 | 500 | 3,800 |
| NOTES: * INCLUDES QA, PLANNING, PROGRAM MANAGEMENT, ENGINEERING, AND TEST MANAGEMENT ** CURRENT INFORMATION SUPPLIED BY CALIFORNIA EMPLOYMENT DEPARTMENT | | | | | | | | |

3.3 SAN PEDRO DIVISION

The San Pedro division is located on Terminal Island, convenient to all commercial marine facilities in Los Angeles Harbor. The facility has unobstructed access to the ocean, drydocking capabilities to 11,000 long tons, crane capacity to 140 tons, and all temporary services. Exhibit 3.3-1 displays an overview of the San Pedro division, including administrative, production, warehouse, drydock, and pier facilities. Exhibit 3.3-2 displays the major shop equipment available to support this program. Exhibit 3.3-3 displays the division's current production manpower composition.

Since August of 1989, SWM San Pedro has repaired the following Exxon vessels:

- Exxon California
- Exxon Jamestown
- Exxon Maine
- Exxon New Orleans
- Barge-502.

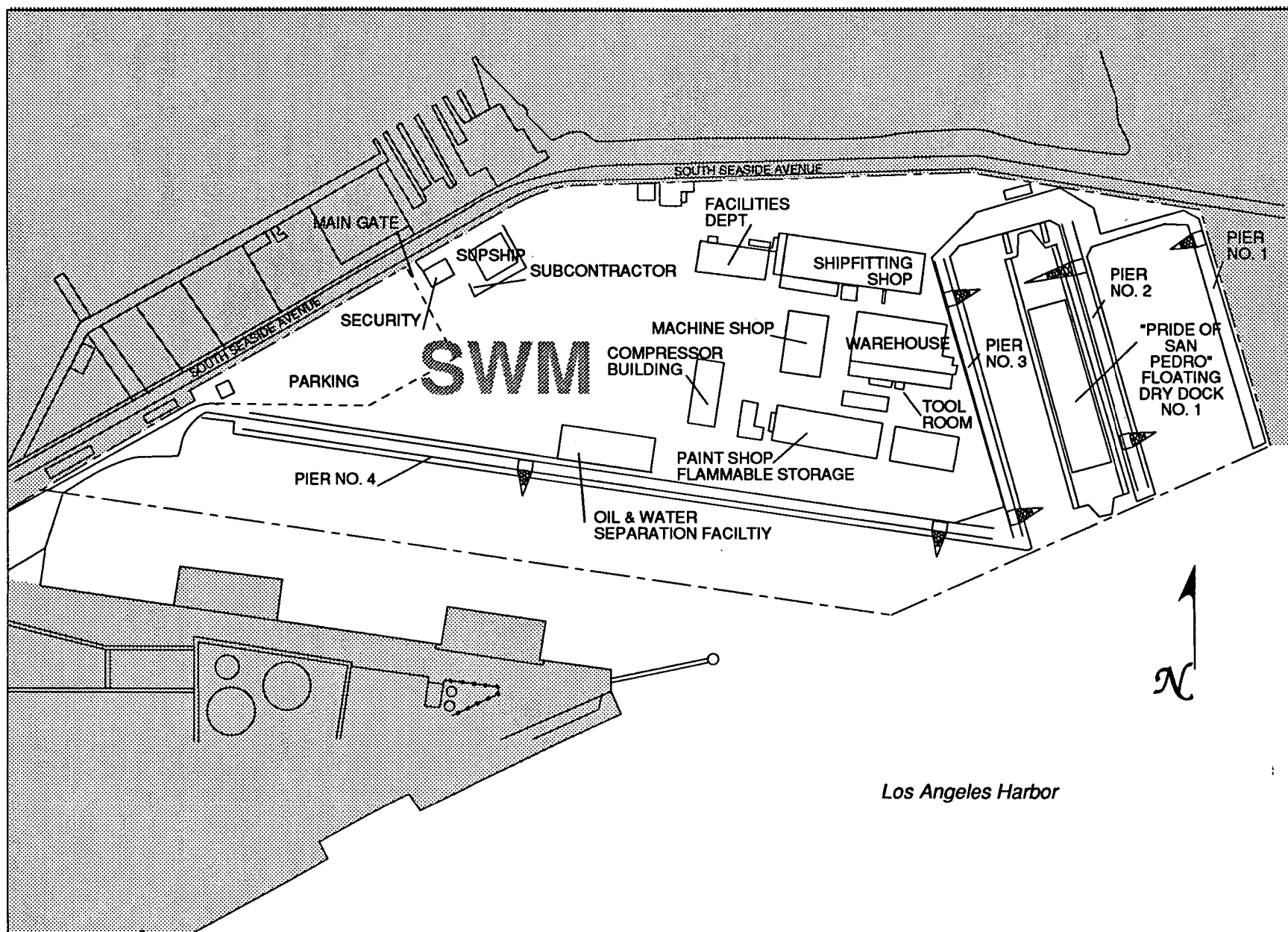


Exhibit 3.3-1
San Pedro Division

SOUTHWEST MARINE, INC.

Exhibit 3.3-2(2)
San Pedro Shop Equipment

| | | | |
|---|--|--|--|
| RIGGING LOFT | | | |
| <u>SIZE</u> | <u>CRANES</u> | | |
| 5,000 SQ. FT. | 6 EA. 22 TON WHIRLEY TOWER CRANES 1 EA. 60 TON CLYDE TOWER CRANE 1 EA. 12 1/2 TON GALION CRANE | | |
| <u>STORAGE</u> | | | |
| (1) TOOLS | (1) 100 SQ. FT. | | |
| (2) MATERIAL | (2) 2000 SQ. FT. (*) | | |
| <u>STAGING</u> | SEE MATERIAL STORAGE (*) | | |
| <u>MAJOR MACHINERY</u> | | | |
| 35 EA. 1 TON CHAIN FALLS | | | |
| 3 EA. 12 TON CHAIN FALLS | | | |
| 3 EA. 10 TON CHAIN FALLS | | | |
| 2 EA. 8 TON CHAIN FALLS | | | |
| 1 EA. 40 TON CHAIN FALL | | | |
| 2 EA. 20 TON CHAIN FALLS | | | |
| 2 EA. 30 TON CHAIN FALLS | | | |
| 1 LOT SLINGS, SHACKLES, RIGGING GEAR, DOLLIES | | | |
| 1 EA. ZINC SMELTING FURNACE, JOHNSON | | | |
| 1 EA. CUT OFF MACHINE, 14", IDEAL | | | |
| <u>SPECIAL</u> | 11 EA. TEST WEIGHTS 5,125 LBS TO | | |
| <u>TEST</u> | 32,102 LBS | | |
| <u>EQUIPMENT</u> | 1 LOT DYNAMOMETERS TO 100,000 LBS. | | |
| | 1 EA. HYDRAULIC COVERLEAF TESTER | | |
| (*) NOTE: | COMMON AREA SHARED BY MATERIAL STORAGE AND STAGING | | |
| SANDBLAST/PAINT SHOP | | | |
| <u>SIZE</u> | <u>CRANES</u> | | |
| 3,080 SQ. FT. | | | |
| <u>STORAGE</u> | | | |
| (1) TOOLS | (1) 600 SQ. FT. | | |
| (2) MATERIAL | (2) 500 SQ. FT. | | |
| <u>STAGING</u> | 2,000 SQ. FT. | | |
| <u>MAJOR MACHINERY</u> | | | |
| 2 EA. WATER CURTAIN VAPOR RECOVERY BLOWERS | | | |
| 1 EA. SANDBLAST BOOTH SET UP FOR FOUR HOSES | | | |
| 1 EA. 8 TON SAND POT W/FOUR NOZZLES | | | |
| 2 EA. AIRLESS PAINT POTS GRACO 20:1 | | | |
| 10 EA. 2 TON WATERTIGHT SAND HOPPERS | | | |
| 4 EA. 5 GALLON PRESSURE POTS | | | |
| 1 EA. 35 TON SAND HOPPER | | | |
| 1 EA. PAINT BOOTH AREA | | | |
| 1 LOT SPRAY NOZZLES AND SANDBLAST NOZZLES AND ALL PERTINENT EQUIPMENT | | | |
| | | | |
| SHEETMETAL SHOP | | | |
| <u>SIZE</u> | <u>CRANES</u> | | |
| 12,280 SQ. FT. | 1 EA. 1 TON JIB CRANE | | |
| <u>STORAGE</u> | | | |
| (1) TOOLS | (1) 200 SQ. FT. | | |
| (2) MATERIAL | (2) 1,700 SQ. FT. | | |
| <u>STAGING</u> | 3,000 SQ. FT. | | |
| <u>MAJOR MACHINERY</u> | | | |
| 1 EA. PRESS BRAKE VERNON | | | |
| 2 EA. LOCKFORMER | | | |
| 1 EA. THROATLESS SHEARS 12 G.A. LENNOX | | | |
| 1 EA. IRONWORKER MOD "D" BUFFALO | | | |
| 1 EA. SPOTWELDER 50 KVA ACME | | | |
| 2 EA. BENCH GRINDER 1/3 H.P. BLACK AND DECKER | | | |
| 1 EA. DRILL PRESS #16 BUFFALO | | | |
| 1 EA. BAR FOLDER #4 NIAGRA | | | |
| 1 EA. RADIAL ARM DRILL CINCINNATI BICKFORD | | | |
| 1 EA. IRON WORKER #0 BUFFALO | | | |
| 1 EA. NIBBLING MACHINE #236 SAVAGE | | | |
| 1 EA. PEDESTAL GRINDER 5 H.P. STANDARD | | | |
| 1 EA. PEDESTAL GRINDER 1-1/2 H.P. AUTOSTART | | | |
| 1 EA. SQUARING SHEAR 3/16 GA. CINCINNATI | | | |
| 1 EA. PRESS BRAKE #50 CINCINNATI | | | |
| 2 EA. POWER ROLL #1447 PEXTO | | | |
| 1 EA. FOOT SHEAR NIAGRA | | | |
| 1 EA. HAND ROLLS NIAGRA | | | |
| 1 EA. HAND ROLLS 18 GA. NIAGRA | | | |
| 1 EA. HANDBRAKE #14 WHITNEY | | | |
| 1 EA. BENDING MACHINE #172 NIAGRA | | | |
| 1 EA. PLASMA CUTTING MACHINE | | | |
| 1 EA. HANDBRAKE NATIONAL | | | |
| 1 EA. PUNCH HYD. ROTE | | | |

Exhibit 3.3-2(3)
San Pedro Shop Equipment

| SHIPFITTER SHOP | | SHIPWRIGHT SHOP | |
|---|-----------------------------------|--|-----------------|
| <u>SIZE</u> | <u>CRANES</u> | <u>SIZE</u> | <u>CRANES</u> |
| 28,000 SQ. FT. | 4 EA. 5-TON OVERHEAD BRIDGE CRANE | 5,800 SQ. FT. | |
| <u>STORAGE</u> | | <u>STORAGE</u> | |
| (1) TOOLS | (1) 1,250 SQ. FT. | (1) TOOLS | (1) 100 SQ. FT. |
| (2) MATERIAL | (2) 3,000 SQ. FT. | (2) MATERIAL | (2) 300 SQ. FT. |
| <u>STAGING</u> | 10,700 SQ. FT. | <u>STAGING</u> | 1,000 SQ. FT. |
| <u>MAJOR MACHINERY</u> | | <u>MAJOR MACHINERY</u> | |
| 1 EA. PLATE ROLLS #8 HILLES-JONES | | 1 EA. 36" CUT OFF SAW IRVINGTON | |
| 1 EA. PRESS BRAKE #400 X 14' CINCINNATI | | 1 EA. TURNING LATHE 12" OLIVER | |
| 1 EA. HYDRAULIC PRESS CAMDEN (JOSHUA HANDY) | | 1 EA. 42" BAND SAW TANNEWITZ | |
| 1 EA. PLATE ROLLS POPE | | 1 EA. RADIAL ARM DRILL CINCINNATI | |
| 2 EA. BENDING SLAB 5' X 5' X 4 1/2" | | 1 EA. BAND SAW 36" TOWSLEY | |
| 1 EA. GATE SHEAR MOTOR DRIVE #8 BERTSCH | | 1 EA. PLANE 8" X 2' - 6" AMERICAN YATES | |
| 2 EA. FLAT CAR 8000 # CAPACITY CALLAHAN | | 1 EA. BAND SAW 36" AMERICAN | |
| 1 EA. BAND SAW #8 MARVEL | | 1 EA. DRILL PRESS #18 BUFFALO | |
| 1 EA. PRESS BRAKE #T-TA VERSION | | 1 EA. BENCH GRINDER CINCINNATI | |
| 1 EA. SQUARING SHEAR 10' X 3/8 NIAGRA | | 1 EA. CIRCULAR CUT-OFF SAW 12" DEWALT | |
| 1 EA. STEEL SHEAR #1806 CINCINNATI | | 1 EA. TABLE SANDING MACHINE 12" DELTA | |
| 1 EA. DISC GRINDER #6 GARDNER | | 1 EA. TABLE SAW 14" DELTA | |
| 1 EA. PEDESTAL GRINDER 5 H.P. STANDARD | | 1 EA. TABLE SAW 10" DELTA | |
| 1 EA. PEDESTAL GRINDER 2 H.P. STANDARD | | 1 EA. JIGSAW 10" KALAMAZOO | |
| 1 EA. PEDESTAL GRINDER 2 H.P. CINCINNATI | | 1 EA. DUST COLLECTION SILO WITH COLLECTION SYSTEM | |
| 1 EA. CONTOUR MACHINE AND CAB DO ALL | | 1 EA. DOWLING MACHINE DELTA | |
| 1 EA. IRON WORKER #1 1/2 UNIVERSAL BUFFALO | | 1 EA. BAND SAW 14" #6 DELTA | |
| 1 EA. KIOKE SANS FLAME SHAPE CUTTING MACHINE | | 1 EA. TABLE SAW 8" #3 DELTA | |
| 19 EA. 300 AMP WELDING MACHINE WESTINGHOUSE | | 2 EA. JOINTER 6" #5 DELTA | |
| 1 EA. 500 AMP WELDING MACHINE WESTINGHOUSE | | 1 LOT ASSORTED WOODWORKING TOOLS AND SMALL EQUIPMENT | |
| 5 EA. GAS DRIVE D.C. 250 AMP WELDER WESTINGHOUSE | | 1 LOT PORTABLE SCAFFOLD (STAGING) | |
| 1 EA. POWER SOURCE 1500 AMP LINCOLN/IDEALARC LT-7 TRACTOR | | | |
| 1 EA. TIG UNIT 300 AMP LINCOLN | | | |
| 1 EA. GAS DRIVE D.C. 400 AMP LINCOLN | | | |
| 1 EA. POWER SUPPLY 300 AMP WITH COBRAMATIC GUN LINDE | | | |
| 1 EA. POWER SUPPLY 1500 AMP WITH 8 2 LEAD WELDING UNITS | | | |
| 2 EA. MIGET GUNS AIRCOMATIC | | | |

Exhibit 3.3-3
San Pedro Division Production Manpower

| | PRODUCTION CRAFTS | | | | | | PROD * SUPPORT | TOTAL |
|---|-------------------|------|------|-------|----------------|-------|-------------------|-------|
| | STRUCT | MACH | PIPE | ELECT | SHEET METAL | OTHER | | |
| PERSONNEL CURRENTLY ON-BOARD | 23 | 24 | 15 | 22 | 14 | 145 | 50 | 293 |
| SOURCES: RECALL FROM LAYOFF | 120 | 90 | 100 | 60 | 60 | 320 | 25 | 775 |
| UNSOLICITED APPLICATIONS | 198 | 89 | 203 | 75 | 22 | 626 | 60 | 1,213 |
| LOCAL LABOR MARKET ** | 300 | 250 | 300 | 250 | 150 | 800 | 155 | 2,050 |
| NOTES: * INDIRECT PERSONNEL ** CURRENT INFORMATION SUPPLIED BY CALIFORNIA EMPLOYMENT DEPARTMENT | | | | | | | | |

3.4 SAN DIEGO DIVISION

The San Diego division is located on San Diego Bay, convenient to the 10th Street Marine Terminal and other marine facilities. The facility has unobstructed deep water access from the main shipping channel, two drydocks, crane capacity to 140 tons, and the full range of temporary services. Exhibit 3.4-1 displays an overview of the San Diego division including administrative, production, warehouse, drydock, and pier facilities. Exhibit 3.4-2 displays the major shop equipment available to support this program. Exhibit 3.4-3 displays a breakdown of the division's current production manpower.

Although SWM San Diego division has not directly supported Exxon repair needs, the San Diego division has significant commercial ship repair experience, including the recent MV Viking Serenade conversion for Royal Caribbean Cruise Lines; drydocking and repair of the cruise liners SS Azure Seas and Bermuda Star; and repairs to the hopper/dredge MV Manzanillo II.

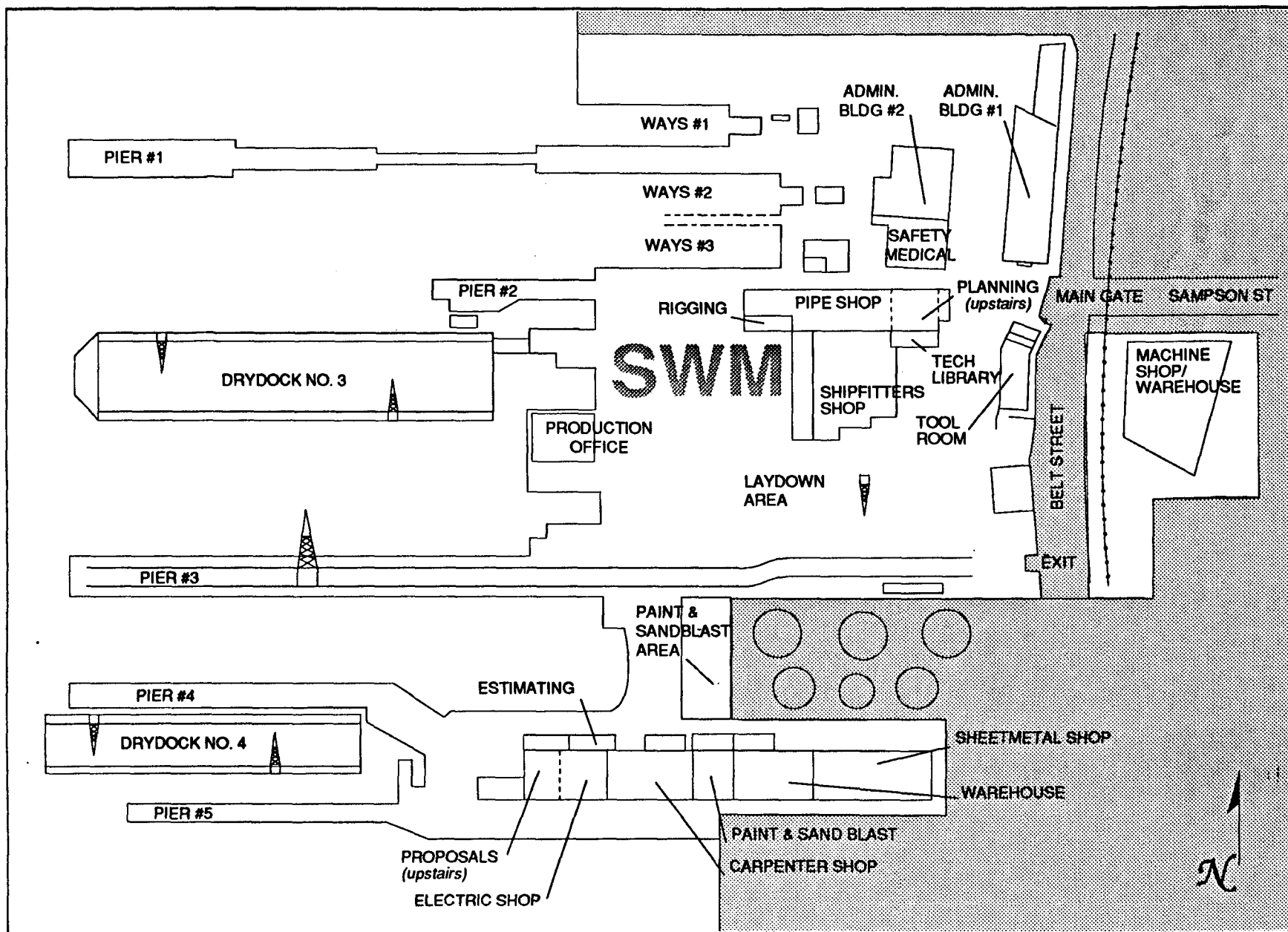


Exhibit 3.4-1
San Diego Division

SOUTHWEST MARINE, INC.

Exhibit 3.4-2(1)
San Diego Shop Equipment

ELECTRICAL SHOP

SIZE CRANE
 10,500 SQ FT (1) 3-3/4 TON JIB CRANE

STORAGE

(1) TOOLS (1) 200 SQ. FT.
 (2) MATERIAL (2) 1,000 SQ. FT.

STAGING 500 SQ. FT.

MAJOR MACHINERY

- 1 EA. BAKE OVEN
- 1 EA. BALANCE MACHINE 3' X 3' SWING
- 1 EA. DIP TANK
- 1 EA. PLATING LATHE
- 1 EA. MACHINE LATHE
- 1 EA. BEAD BLASTER
- 1 EA. DRILL PRESS, 1/2-INCH CAPACITY
- 1 EA. VIBRATION ANALYZER
- 2 EA. 50-1000 V MEGGERS
- 1 EA. HYPOT
- 2 EA. HIGH AMP SWITCHING CONTRACTS
- 1 EA. HYDRAULIC PRESS 25 TON, WILSON
- 1 EA. SOLVENT TANK
- 1 EA. BEARING INDUCTION HEATER
- 1 EA. REWIND MACHINE & FULL SET OF HEADS
- 1 EA. SURGE TESTER
- 3 EA. POWER SUPPLIES, 2 AT 400, 1 AT 800 AMP DC
- 1 LOT VARIOUS HAND-HELD MULTIMETERS, CLAMP-ON AMMETERS, ETC.
- 1 LOT CONNECTOR INSTALLATION TOOLS
- 1 EA. 60 HZ REGULATED POWER SUPPLY
- 1 EA. 400 HZ REGULATED POWER SUPPLY
- 1 LOT GENERAL-PURPOSE ELECTRONIC TEST EQUIPMENT
- 1 EA. 6'-12" HORIZONTAL BAND SAW
- 1 EA. 18" VERTICAL BAND SAW

SPECIAL TEST EQUIPMENT FACILITIES WITHIN ELECTRIC & ELECTRONIC SHOPS
 5,000 KW SALT BOX
 800 KW SALT BOX
 350-360 KVA REACTIVE LOAD BANKS

CARPENTER SHOP

SIZE 14,160 SQ. FT.

STORAGE

(1) TOOLS (1) 130 SQ. FT.
 (2) MATERIAL (2) 3,600 SQ. FT.
 (+16,100 SQ. FT. SCAFFOLDING)

STAGING 1,750 SQ. FT.

MAJOR MACHINERY

- 1 EA. ROCKWELL TILTING ARBOR SAW 12"-14"
- 1 EA. POWERMATIC TABLE SAW 10"
- 1 EA. POWERMATIC WOOD LATHE
- 1 EA. SOUTH BEND LATHE
- 1 EA. YATES BANDSAW
- 2 EA. CRESCENT BANDSAW
- 1 EA. ROCKWELL RADIAL ARM SAW 16"
- 1 EA. CRAFTSMAN RADIAL ARM SAW 10"
- 1 EA. ROCKWELL DRILL PRESS
- 1 EA. BLACK HAWK DRILL PRESS
- 1 EA. OLIVER PLANER
- 1 EA. JENISON JOINTER 16"
- 1 EA. ROCKWELL JOINTER 8"
- 1 EA. FAY-EGAN JOINTER 12"
- 1 EA. CRAFTSMAN SHAPER
- 1 EA. TOSHIBA DISC SANDER 12"
- 1 EA. WALKER-TURNER DISC 10" - BELT SANDER 48"
- 1 EA. GENERAL ELECTRIC HACK SAW 18"
- 1 EA. DOWEL HOLE MACHINE MILWAUKEE
- 1 EA. CRAFTSMAN GRINDER 6"

MACHINE SHOP

SIZE CRANES
 INSIDE: 19,000 SQ. FT. 1 EA. 20 TON OVERHEAD TRAVEL CRANE
 OUTSIDE: 6,000 SQ. FT. 1 EA. 10 TON OVERHEAD TRAVEL CRANE

STORAGE

(1) TOOLS (1) 500 SQ. FT.
 (2) MATERIAL (2) 1,500 SQ. FT. PLUS YARD STORAGE

STAGING

1,000 SQ. FT.

MAJOR MACHINERY

- 2 EA. 72" X 34" NILES LATHE
- 1 EA. 64" X 36" BETTS LATHE
- 1 EA. 32" X 132" SZERSZAM LATHE
- 1 EA. 20" X 108" AXELSON LATHE
- 1 EA. 20" X 72" DAEWOOD LATHE
- 1 EA. 20" X 60" AXELSON LATHE
- 3 EA. 42" MILLS
- 2 EA. 62" MILLS
- 1 EA. 42" VERTICAL GRAFFENSTADEN LATHE
- 1 EA. 62" VERTICAL KING LATHE
- 1 EA. 1/2" ROCKWELL PEDESTAL DRILL PRESS
- 1 EA. 5' CARLTON RADIAL ARM DRILL
- 1 EA. 3' MEUSER RADIAL ARM DRILL
- 1 EA. 36" BLANCH GRINDER
- 1 EA. 6" X 18" DELTA SURFACE GRINDER
- 1 EA. 2-1/2" HORIZONTAL BORING MILL
- 1 EA. 5" HORIZONTAL BORING MILL
- 1 EA. 36" JOHNSON VERTICAL BAND SAW
- 1 EA. 18" X 23" DOALL HORIZONTAL BAND SAW
- 1 EA. 25 TON HYDRAULIC PRESS
- 1 EA. 50 TON HYDRAULIC PRESS
- 1 EA. 2 STATION UNIVERSAL BEAD BLASTER
- VARIOUS GRINDERS & SANDERS

SPECIAL TEST EQUIPMENT (1) VALVE OVERHAUL & HYDROSTATIC TESTING CAPABILITIES
 (2) ROCKWELL HARDNESS TESTER 20,000 PSI HYDROSTAND

Exhibit 3.4-2(2)
San Diego Shop Equipment

PIPE SHOP

| <u>SIZE</u> | <u>CRANES</u> |
|---------------------|------------------------------------|
| INSIDE: 6,800 SQ FT | 2 EA. 2 TON OVERHEAD TRAVEL CRANES |
| | 1 EA. 1 TON OVERHEAD TRAVEL CRANE |

STORAGE

| | |
|--------------|-------------------|
| (1) TOOLS | (1) 500 SQ. FT. |
| (2) MATERIAL | (2) 7,500 SQ. FT. |

| | |
|----------------|---------------|
| <u>STAGING</u> | 1,500 SQ. FT. |
|----------------|---------------|

MAJOR MACHINERY

- 4 EA. RIDGID THREADING MACHINES, 1/8" - 6"
- 1 EA. LEBLOND REGAL LATHE, VARIABLE SPEED
- 1 EA. COAST BENDER 8" IPS SCH 80
- 1 EA. PIPE BENDER NO. 2, 2" SCH 80, 5" RADIUS
- 1 EA. BUFFALO, PUNCH HOLES UP TO 7/8" SHEAR PLATE 5/8"
- 2 EA. HAND OPERATED HYDRAULIC BENDER, 1/2" - 2"
- 2 EA. ELECTRIC HYDRAULIC BENDER, 1/2" - 3"
- 1 EA. CLARK, 3H9AWD, 12" WHEELS
- 1 EA. GRAY PEDESTAL GRINDER, 9" WHEELS
- 6 EA. P-GRINDER, DATCO, 90 DEGREES & STRAIGHT
- 4 EA. LINCOLN 250 WELDER
- 1 EA. LINCOLN SHORT ARC WELDER
- 1 EA. TIG #433 HIGH-FREQUENCY WELDER
- 2 EA. AEROQUIP 1/4" TO 2" HOSE MACHINE
- 3 EA. VERTICAL BAND SAWS
- 1 EA. WALKER TAPERED DRILL PRESS, PEDESTAL
- 1 EA. CLEARMAN TAPERED DRILL PRESS, BENCH

| | |
|-------------------------------|---|
| <u>SPECIAL TEST EQUIPMENT</u> | (1) SHOP HYDROSTATIC TESTING CAPABILITIES (2) HYDRO TEST PUMP 6000 PSI |
|-------------------------------|---|

SHEET METAL SHOP

| <u>SHOP SIZE</u> | <u>CRANE</u> |
|------------------|---------------------|
| 13,300 SQ FT | 1 EA. 1/2 TON CRANE |

STORAGE

| | |
|--------------|-------------------------------------|
| (1) TOOLS | (1) 210 SQ. FT. |
| (2) MATERIAL | (2) 1,000 SQ. FT. PLUS YARD STORAGE |

STAGING

300 SQ. FT.

MAJOR MACHINERY

- 1 EA. POWER SHEAR, WYSON & MILLES, 10", 16 GAUGE
- 1 EA. POWER BRAKE, PACIFIC 1/4" X 144", 150-TON MAX
- 1 EA. POWER BRAKE, H.T.C. HYDRA, 96", 14 GAUGE ASSORTED DIES
- 1 EA. POWER ROLLER PECK-STOW & WILCOX, 11 GAUGE, 36" ROLLS
- 1 EA. POWER ROLLER, PECK-STOW & WILCOX, 1/4" THICK, 96" ROLLS
- 1 EA. HAND BRAKE, CHICAGO, 10-FOOT
- 2 EA. HAND BRAKE, CHICAGO, 4-FOOT, 48" FINGER BRAKE
- 1 EA. BAND SAW, DOALL METAL MASTER, 3-WHEEL, ISA
- 1 EA. IRON CRAWLER W/PUNCHES, NOTCHER, ANGLE CUTTER & SHEAR
- 1 EA. TURRET PUNCH, ROTEX, 16 GAUGE, 2-1/2" DIA., ASSORTED DIES

SHEET METAL SHOP CONT.MAJOR MACHINERY (CONT)

- 1 EA. CIRCLE CUTTER, GEORGE TOOL CO., 54" DIA
- 1 EA. STOMP SHEAR, NIAGARA, 36", 18 GAUGE
- 1 EA. POWER LOCKFORMER, 16 GAUGE
- 1 EA. PITTSBURG & PIPELOCK FORMER, 16 GAUGE
- 2 EA. WELDER, AIRCO 250 AMP TIG, 10-310 AMP
- 1 EA. HELIWELDER, AIRCO 250 AMP, 7-310 AMP
- 1 EA. CNC/CAM - PLASMA-ARCH WITH SOFTWARE
- 2 EA. WELDER, AIRCOMATIC MIG, 20 AMP, AIRCO WIRE FEEDER
- 2 EA. WELDER, AIRCO, AC-DC (STICK), 35-270 AMP
- 1 EA. WELDER AIRCO, CV-250, 16-36 V, 250 AMP
- 1 EA. HAND ROLLER, PEXTO, 36" ROLLS
- 2 EA. FORMING, BEADING, EDGING MACHINE, 16 GAUGE
- 1 EA. BAR FOLDER, NIAGARA, 18 GAUGE
- 1 EA. 36" PULLMAX NOTCHER
- 1 EA. HAND BRAKE, CHICAGO, 8"
- 1 EA. HAND BRAKE, PECK-STOW, 30"
- 1 EA. BAND SAW, DO-ALL
- 2 EA. HAND NOTCHER, PECK-STOW/DI-ACRO
- 2 EA. DRILL PRESS, SUMMIT
- 1 EA. PUNCH/FABRICATOR, WALES
- 3 EA. HAND SHEARS, BEVERLY

SANDBLAST/PAINT SHOP

| | |
|-------------|----------------|
| <u>SIZE</u> | 20,700 SQ. FT. |
|-------------|----------------|

STORAGE

| | |
|--------------|-------------------|
| (1) TOOLS | (1) 2,000 SQ. FT. |
| (2) MATERIAL | (2) 1,600 SQ. FT. |

| | |
|----------------|---------------|
| <u>STAGING</u> | 1,400 SQ. FT. |
|----------------|---------------|

| | |
|-------------------------------|---|
| <u>SPECIAL TEST EQUIPMENT</u> | SAND RECYCLING EQUIPMENT HAZARDOUS WASTE HANDLING FACILITIES |
|-------------------------------|---|

MAJOR MACHINERY

- 2 EA. 10 TON SANDBLASTING VACUUM RECOVERY SYSTEM
- 1 EA. 600 LB SANDBLAST POT, W/ONE NOZZLE
- 1 EA. 600 LB SANDBLAST POT, W/2 NOZZLES
- 2 EA. 6 TON SANDBLAST POT W/4 NOZZLES
- 1 EA. 18 TON SANDBLAST POT W/6 NOZZLES
- 2 EA. 28 TON STEEL-SHOT BLAST POT W/8 NOZZLES
- 1 EA. 50 TON STEEL-SHOT BLAST POT W/8 NOZZLES
- 1 EA. 400 TON BULK SAND HOPPER
- 10 EA. 2-1/2 TON FLO-BINS WATERTIGHT SAND CONTAINERS
- 2 EA. 34 TON STEEL-SHOT HOPPER FOR 28 TON BLAST POT
- 6 EA. GRACO AIRLESS PUMP 45:1
- 3 EA. GRACO AIRLESS PUMP 30:1
- 10 EA. 2 GALLON CONVENTIONAL PRESSURE POT
- 2 EA. 2 GALLON AGITATOR PRESSURE POT (INORGANIC ZINC)
- 4 EA. 5 GALLON CONVENTIONAL PRESSURE POT
- 2 EA. 5 GALLON CONVENTIONAL AGITATOR POT (NON-SKID)
- 1 EA. SPRAYBOOTH
- 1 EA. HEATER FOR AIRLESS "HOT APPLICATION" OF COATINGS
- 6 EA. BULLARD AIR-BREATHING FILTER
- 1 EA. BLASTRAC MACHINE 48"
- 1 EA. BLASTRAC MACHINE 20"
- 1 EA. BLASTRAC MACHINE 10"
- 2 EA. DUST COLLECTOR 15,000 CFM
- 1 EA. DUST COLLECTOR 6,000 CFM

Exhibit 3.4-2(3)
San Diego Shop Equipment

STRUCTURAL SHOP

| <u>SIZE</u> | | <u>CRANES</u> |
|----------------|-------|--|
| 16,000 SQ. FT. | 3 EA. | 8-3/4 TON JIB CRANE (SHIPFITTER'S FABRICATION AREA) |

STORAGE

| | |
|--------------|------------------------------------|
| (1) TOOLS | (1) MAIN TOOL ROOM (5,500 SQ. FT.) |
| (2) MATERIAL | (2) 15,000 SQ. FT. (YARD STORAGE) |

STAGING

10,000 SQ. FT.
 4,000 SQ. FT. (FABRICATION BED)

MAJOR MACHINERYIRON WORKING EQUIPMENT

1 EA. RADIAL ARM DRILL
 1 EA. BUFFALO IRON WORKER
 1 EA. TING JIANG PUNCH
 1 EA. CLEVELAND IRON WORKER
 1 EA. DO-ALL BAND SAW
 2 EA. PRESS BRAKE 400-TON
 1 EA. PLATE SHEAR, 3/4" X 12" CAPACITY
 1 EA. PLATE ROLLER, 3/4" PLATE CAPACITY
 1 EA. TRAVAGRAPH OPTICAL BURNING MACHINE
 (SIX BURNER) WITH PAC 44 PLASMA
 1 EA. ABRASIVE CUT-OFF SAW
 1 EA. SHAPE ROLLER
 4 EA. PLATTENS

BURNING/WELDING EQUIPMENT

15 EA. SHAPE RACKS
 160+ WELDING UNITS (OXYACETYLENE, TIG, MIG,
 ARC, PLASMA, HI-FREQ.) AND
 ASSOCIATED POWER SUPPLIES
 50+ WIRE FEEDERS
 1 EA. TANAKA TRACK BURNER
 1 EA. MK RAT-PACK TRACK BURNER
 2 EA. COOPER HEAT SET-UP

RIGGING SHOP

| <u>SIZE</u> | <u>CRANES</u> |
|---------------|------------------|
| 2,541 SQ. FT. | VARIOUS (NOTE 1) |

STORAGE

| | |
|--------------|----------------------------|
| (1) TOOLS | (1) 300 SQ. FT. |
| (2) MATERIAL | (2) 2,200 SQ. FT. (NOTE 2) |

STAGING

(NOTE 2)

MAJOR MACHINERY

12 EA. 1/2 TON CHAINFALLS
 38 EA. 1 TON CHAINFALLS
 22 EA. 1-1/2 TON CHAINFALLS
 16 EA. 2 TON CHAINFALLS
 17 EA. 3 TON CHAINFALLS
 4 EA. 4 TON CHAINFALLS
 1 EA. 5 TON CHAINFALLS
 8 EA. 6 TON CHAINFALLS
 3 EA. 8 TON CHAINFALLS
 7 EA. 10 TON CHAINFALLS
 7 EA. 12 TON CHAINFALLS
 2 EA. 17 TON AIR HOIST
 2 EA. 25 TON AIR HOIST
 2 EA. 30 TON CHAINFALLS
 14 EA. 3/4 TON COME-A-LONG
 33 EA. 1 TON COME-A-LONG
 48 EA. 1-1/2 TON COME-A-LONG
 30 EA. 3 TON COME-A-LONG
 14 EA. 6 TON COME-A-LONG
 1 LOT SLINGS, SHACKLES, RIGGING
 GEAR, DOLLIES
 1 EA. ZINC SMELTING FURNACE
 1 EA. CUT OFF MACHINE 14"
 1 EA. DRILL PRESS
 1 EA. GRINDER 10"
 1 EA. WELDING MACHINE
 1 EA. PYROMETER
 6 EA. HYDRUSHEAR
 1 EA. HYDRAULIC SWAGER

SPECIAL
TEST
EQUIPMENT

| | | | |
|----------------|-------------|---------|---------------------------------------|
| (1) FACILITIES | (1) | 10 EA. | 10 LBS STEEL WEIGHTS |
| | | 250 EA. | 50 LBS LEADS INGOTS |
| | | 20 EA. | 85 LBS CONCRETE BLOCKS |
| | | 1 LOT | TEST WEIGHTS 100 LBS TO 30,000 LBS |
| | | 1 EA. | HYDRAULIC DECK TIEDOWN TESTER |
| | | 1 EA. | PADEYE TESTER |
| | | 1 LOT | DYNAMOMETERS TO 100,000 LBS |
| | | 1 EA. | LOAD CELL 150,000 LBS |
| | | 1 EA. | DECK TIE DOWN TESTER |
| | (2) SPECIAL | (2) | 1 EA. |
| | | 1 EA. | PUSHBOAT |

NOTE:

(1) A COMMON AREA WITH 2,200 SQ. FT. IS UTILIZED FOR
 BOTH STORAGE AND STAGING.

Exhibit 3.4-3
San Diego Division Production Manpower

| | PRODUCTION CRAFTS | | | | | | PROD * SUPPORT | TOTAL |
|---|-------------------|--------|-------|--------|----------------|--------|-------------------|---------|
| | STRUCT | MACH | PIPE | ELECT | SHEET METAL | OTHER | | |
| PERSONNEL CURRENTLY ON-BOARD | 135 | 123 | 151 | 92 | 283 | 622 | 186 | 1,592 |
| SOURCES: RECALL FROM LAYOFF | 155 | 69 | 45 | 66 | 48 | 530 | 23 | 936 |
| UNSOLICITED APPLICATIONS | 435 | 345 | 190 | 320 | 95 | 1,100 | 40 | 3,260 |
| LOCAL LABOR MARKET ** | 6,100 | 14,788 | 5,400 | 17,000 | 1,800 | 85,000 | 1,000 | 115,787 |
| NOTES: * INDIRECT PERSONNEL ** CURRENT INFORMATION SUPPLIED BY CALIFORNIA EMPLOYMENT DEPARTMENT | | | | | | | | |



February 18, 1992

Captain Jerry Aspland,
President
Arco Marine
300 Oceangate
Long Beach, CA 90802

Dear Jerry,

We at Southwest Marine and Northwest Marine have developed a highly effective system for reducing the cost of ongoing vessel maintenance and modernization. We believe this approach could be of great value to your company. As a contractor who has competed for and accomplished work for Arco, we have seen areas where we believe we could improve our service to you. To attain these improved levels of performance, it is necessary to modify our approach to planning and scheduling the work. This new approach can best be supported by developing a new contract between our companies under which we execute the work.

This general concept has been used by Northwest Marine for a long time. After Southwest Marine acquired Northwest Marine, they brought their considerable resources and experience into this process. Southwest Marine has also supplied the capital and organizational support allowing us to create the long term working relationships we envision in our proposal. Our system includes pre-sourced Negotiated Procurements. A great deal of responsibility is assumed therefore by the shipyard, not only for the positive outcome of the project, but also for minimizing the total final cost to the owner.

Based on our experiences with other ship operators, we have refined an approach to Negotiated Procurements for tanker shipyard work which works well. We continue to refine and modify it to suit the ever increasing requirements of our customers. You are well aware of the shrinkage in the size of the market we serve. Even though our market is smaller than it used to be, we have chosen to serve a few customers and serve them very well. By following this business plan, we will optimize our utilization of resources and reduce our cost for the delivery of shipyard services. Our company is structured to achieve this objective in all four of our West Coast network facilities.

Our experiences of the last decade have shown that well planned Negotiated Procurements can be far less costly to a ship operator than standard fixed-price arms length competitive bids. The vessel operators who have used this system with us return for repeat engagements by choice, not by contract. They prefer this concept with us because we deliver to them the quality and timeliness they require at the lowest available total cost.

Should we fail to perform under these conditions, other contractors could very easily take the work away from us. We have held these accounts by delivering the best possible work at the lowest possible cost to the owner one project at a time. Each projects success sells the next project, as we build the confidence levels of all participants for the next work opportunity. Our range of experience with this type of Negotiated Procurement includes cruise ship lines, U.S. Navy vessels and of course, U.S. flag tanker operators.

The program we describe in the attached proposal puts you, your company and your vessels in a special preeminent position in our company's business plan. Your projects get first call on our key personnel and facilities. We build special teams to work on an ongoing basis with your organization. Together your company and ours designate who will lead these teams. The people we choose are committed to you when and where you need them. As the relationship builds, these people develop a strong affinity for the needs and the goals your organization establishes. Our team members become as committed to your success as do your own people. Here familiarity breeds success. Each success paves the way to more successes and higher expectations from all parties. Less than critical acclaim from senior management becomes unacceptable.

In the relationships which we currently have in place, our commitments to one another have spanned many projects. It is frequently difficult for an outside observer to distinguish between customer personnel and contractor personnel. This is because they are both so committed to the successful completion of the tasks at hand. They work together toward those mutually defined objectives, never against each other. Everyone pulls on the same rope in the same direction.

On many occasions, senior production personnel are sent out to customer vessels to perform work while the vessel is underway, continuing to generate revenue for the owner. These people use the opportunity not only to accomplish repair work that doesn't require yard time, but also to become better acquainted with the ship, its crew and operating systems. This familiarity continues to enhance our performance level during scheduled yard periods. The knowledge gained during yard periods frequently gives rise to opportunities to do this type of work while the vessel is underway. Each type of work tends to improve the utility of the other.

The management focus given by our company to these specially built relationships gets attention at all levels of our company. The commitment to this focus is made by both the Chief Executive Officer and the Chief Operating Officer. This dedication is shared from other senior management all the way down to the newest apprentice on the deck plates. This focus and commitment by management covers all the resources of our company. As the size of our market has declined, so has the number of highly qualified personnel who service these markets. Customers who form these special relationships with our company are positively assured of the availability and identification of these resources. Our company believes that by building this type of relationship we can most effectively employ, fully utilize and assure the future of the resources we have.

The approach we take minimizes our cost to perform your work. The number of hours required to give you the end product is dramatically reduced.

We strive to this smaller number of hours for two major reasons:

First, we can plan and schedule our work load and resource commitments well in advance. As a result we have fewer gaps in our production schedule which we must fill in competitive markets for scarce work. A fully projected workload allows us to justify even higher levels of capital spending which will further reduce the number of hours required to complete our work.

Second, there is minimal if any unplanned work during the performance period. This allows us the opportunity for extremely effective planning and scheduling of the jobs. It also allows us to avoid the always uncomfortable discussions surrounding the justification for the additional cost of unplanned work. As you know, these costs are always higher than the cost to perform similar work which has been planned, prefabricated when possible, and properly scheduled. In addition, we are never able to fully recover all the costs we incur for emergent work.

We all win when we lower your cost.

Our company has dedicated itself to an improved approach to the work through recently initiated training and implementation of Total Quality Management practices. Continuous process improvement while work is underway complements our vigorous approach to the safety and environmental issues in our industry. Strict adherence to both our company's spirit and intent in these areas is kept a high priority by our specially trained teams. They see these high priority issues get the proper focus as we strive continuously to improve all our work practices.

We feel you have little to lose and much to gain by studying our proposal and entering into substantive discussions with us. These working sessions will allow us to formulate a mutually acceptable approach to test the concepts on Arco ships and prove their merits. Our 4,000 plus person network of shipyards stands prepared to serve you. We want to give you the benefit of the knowledge, experience and training we have gained achieving top notch results in this mode of business operation. We want to sell ourselves to you with each job.

Yours very truly,

William H. Zavín, II
Senior Vice President
Commercial Contracting Activities

PROPOSAL

This proposal will outline a framework for initial discussions leading to an experiment conducted by our two companies. The purpose of this experiment would be to refine and tailor a process through which we might negotiate future procurements for planned work packages on Arco Marine vessels. This process would exploit the knowledge and experience gained in many ventures by both of our companies. The Southwest Marine network has considerable experience in planned maintenance on sea going vessels. Arco Marine is widely regarded to be the premier domestic operating fleet in the T.A.P.S.

The primary tool employed in this experiment will be advanced planning. Perfection of this phase of the repair cycle by our two companies will pay maximum dividends to all. Enhancing critical feedback mechanisms under our jointly designed system will allow us to precisely define work to be accomplished and specific plans for execution.

In preparation for the first vessel availability, a contractor organization chart is jointly prepared by the two companies. Southwest Marine will select a Program Manager for negotiated procurements with Arco Marine. This selection will of course be done in concert with Arco. This Program Manager will be your company's primary management level point of contact. The Program Manager and Arco executives will together develop a roster of key players whose availability will be assured for Arco projects. These people include but are not necessarily limited to a Program Planning Coordinator, Project Ship Superintendents, a Senior Estimator, Safety Director and a Naval Architect/Engineering Services Coordinator.

The personnel agreed upon in the joint discussions will be available to Arco Marine for their availabilities in each of our four West Coast facilities. While it is our intent to increase mutual familiarity and knowledge with these teaming designations, we are not in any way precluding specific production supervision designation by the teams. The first vessel event commences when Southwest Marine receives the basic work outline from Arco. Along with this initial description of work to be performed, Arco will submit an availability schedule and estimated budget. Southwest Marine will undertake a review of the work package and develop its best view of the schedule and cost. After this review is complete, the initial meeting between the Arco Marine and Southwest Marine Project Management Teams takes place. The tone for all subsequent gatherings is set at the initial meeting. Both groups commit to mutual success. Neither party lays in wait for the other. Our mutual commitment to success precludes gamesmanship in any form.

In each session, particular attention is paid to areas of potential difficulty in the work place when the actual project begins. A truly comprehensive approach to planning and scheduling activities from the outset of each project will help us minimize and hopefully eliminate unplanned growth during each work period. At each planning session we will utilize Lessons Learned from previous availabilities on Arco work as well as drawing from experience we have each gained on other projects.

At the first meeting, Southwest Marine's team will present their initial concept of how best to plan, schedule and describe the project. An initial series of events will be submitted in written form by Southwest Marine at that gathering. In preparation we will perform an internal review of the work package and develop our own projected budget cost for the work as described. The process evolves through a series of meetings and ship checks where each side familiarizes the other with their thoughts on how best to approach the work package. After this "brainstorming" phase, we generally begin a series of vessel surveys. Key personnel from both elements of the team participate jointly in this phase. After these surveys are completed, together we refine our collective approach to the project and determine the best avenues to minimize out of service time and cost.

After the reviews have been completed and a mutually agreeable statement of work is negotiated, additional work is done as required to assure both parties that we have successfully trimmed the schedule and the price. At this point we proceed to detailed planning and scheduling. This detailed work includes long lead material procurement, manpower planning and facility scheduling, as well as further cost reviews. A significant effort is made at this point to plan to the required detail and to assure all parties that our statement of work is truly complete and all contingency preparations are made.

A major check point here is to see that we utilize as much prefabrication and plan for the most effective utilization of shop facilities during the yard period. Our significant investment in facilities and equipment complements our skilled trade reservoir, to take full advantage of the economies allowed with the mechanical advantage and production efficiency of our shops. A planned shop repair task requires considerably less hours than one performed in place on the ship.

At the completion of the work, we conduct a mutual Lessons Learned meeting. One of our most effective planning tools is Lessons Learned from previous projects. The Lessons Learned process gives great insight as to how we might re-posture ourselves to do even better on ensuing projects. We always attempt to incorporate previous Lessons Learned into each project plan and schedule.

Since this would be a new type of undertaking between our companies, we feel the Lessons Learned from our first joint endeavor will have special value and meaning. On that basis we are proposing a three ship package experiment to you. We are confident you will be very pleased with the first vessel. We are just as confident the second and third efforts following our Lessons Learned evolutions will be even better. We will have improved knowledge of how best to assign responsibilities between the teams and team members for each successive vessel event.

The ability to plan the next availability and the potential for a continuum of business, will drive our organization to continuously higher levels of productivity and cost effectiveness. As the teams become more familiar with each other, we will continue to refine communication channels. We will further define and upgrade the placement of specific project responsibilities. Through the process we will also be able to determine which facilities in our network will be the most effective for each type of work on Arco ships.

February 14, 1991

P & O Lines, Ltd.
Dukes Keep
Marsh Lane
Southampton SO9 4GU
England

Attention: Mr. R.C. Oliver, Technical Director

Dear Bob:

We are pleased to offer this discussion describing our methods and approach to negotiated procurement. Our Companies have utilized this approach successfully over a long period of time with a number of major ship operators in the industry. Together, our customers and ourselves have found that we generate two very important elements that form the basis of a very successful project as we utilize this approach to the work.

Two main elements absolutely critical to cost effective projects being done with a minimum of out of service time are: 1) Plenty of advance planning with adequate long lead procurement time, and 2) A precisely defined and well thought-out definition of the work. We and our customers have found that together we prepare a superior work package and perform the work at an optimal cost and minimum time out of service. In this letter I will offer you a notional approach to this process.

We do not have a prepared system that we apply to every customer. Each "contract" is custom designed to meet the mutual requirements that each party brings to the long and successful relationship.

Initially we review together our organizations to select the Project Leadership Teams. These teams, which include Estimators, Project Managers, Project Superintendents, Engineers and Craft Foremen, are developed to be responsive to the particular type of work your company will generally emphasize. We build this working team for your company to create the familiarity not only to the company's requirements but also so the faces and personalities remain the same project to project. We make these people available to you in each of our four facilities wherever it is most convenient and cost effective for you to have us perform your work. These teams are also available to perform services for you while your vessels are under way, these same people work with your staff to develop work package requirements and projected schedules.

As these schedules are prepared concurrent with specification development, we work with you to establish the best approaches to minimize the cost to your operating budget. We continue to perform surveys and ship checks as necessary to refine and precisely define not only the specific work and how we will do it, but also what potential unplanned events in the form of emergent work may appear.

Together these blended teams develop contingency plans to prepare for and minimize the impact and cost of emergent work. One of the strongest comments continuously made by our existing customer base is how we maximize the ships operating time by minimizing unplanned events and being prepared for their possibility. These same people are available for Tiger Team (Flying Teams) work on either a planned or an unplanned basis. Their service to you is available 365 days out of the year. As you begin to utilize these people they tend to become an extended part of your organization. They take pride in your success as it results from their efforts in supporting your needs. They are proud of getting you back generating revenue on time, with minimum to nominal growth in a work package that is performed to your standards and on budget.

We generally prefer to work under a negotiated lump sum price for this type of procurement. While we have the ability to do work on a time and material basis, it is usually much easier to negotiate the price prior to commencing work, than to review cost returns after the vessel has returned to service. Most of our customers agree with this philosophy. We rarely fail to reach a price acceptable to both parties well in advance of the work.

In addition to working with our Company whose complement of skilled personnel exceeds 4,000 people in our four shipyard network, our customers have found that our financial strength is of advantage to them as well. We are able to attract very good pricing from our material suppliers and subcontractors as a result of our financial substance. Our organization is stable because of our ability to hold people when work slows down and because we shift talent, skill and equipment from facility to facility as needed. Our skills have been honed in competitive markets and our financial strength comes from earning our way in our industry successfully with successful projects.

In addition to having made the most investment of any contractor on the West Coast, in productive equipment and facilities, Southwest Marine has led the industry on the Pacific Coast in investing in the enhancement of its manpower production efficiency. We have invested very heavily in outside professional services whose mission has been to improve the number of productive man hours we are able to obtain from each man day of work. These enhancements have included better individual planning systems and improved material flow, as well as proper tool utilization and reduction in the number of hours where manpower in the work place is not properly directed or supported. These increases to our already high levels of productivity have allowed us to deliver considerably more work per man hour than any other shipyard contractor on the West Coast. We feel we have invested our hard earned profits well, to the betterment of both our customers and our company. Our customers agree.

Our Company's attention to safety and environmental concerns has earned us our premier place on the West Coast of the United States. This attention parallels our dedication to the principles of Total Quality Management, which we use in every project we undertake. Really using the process and not just talking about it has helped to separate us from other shipyards. This four step process which first defines project objectives and challenges is critical. The second step in this process is the implementation of our plans to achieve the objectives of the first step. In the third step we assess how well we've done in our first and second steps. In the final step of the process we re-evaluate our plans. This re-evaluation allows us to make ongoing decisions on how best to adjust the program to make sure we achieve each and every one of our objectives. We make sure that we hold to our original plan and rate of accomplishment of that plan. This carefully planned and organized strategy prevents problems before they can occur and is observed throughout our entire organization.

P & O Lines, Ltd.
February 14, 1991
Page 3

Our Company sees the 90's requiring customers and contractors to successfully establish new types of working relationships. This new orientation will be based on flexible and thoroughly understood working philosophies. These new approaches will yield more successful undertakings in both the short and long run. These modifications will yield benefits that were inconceivable in the 70's and 80's.

We will make available to you the names of customers and individual contacts with whom we have enjoyed these long-term multi-year relationships. We have confidence they will endorse my comments and enthusiasm for the process. We all believe that our Company's broad base of work experience which spans from government through tanker to cruise ship markets uniquely qualifies us to give you the support and response to your needs which you seek. Please feel free to call either Quintin Watt or myself at your convenience.

Yours very truly,

William H. Zavin, II
Senior Vice President
Commercial Contracting Activities

WHZ/rep

NWMAR131096

We recognize that the timing, nature and mix of repair activities undertaken by our company will be dictated by your fleet operating requirements. The circumstances which drive your decision making process to optimize the utilization of your fleet are beyond our ability to forecast or predict. Because of this fact and also because of the very competitive nature of the repair market for the United States flag vessels, we feel it appropriate to lead into any extensive pricing matrix with this preamble.

Our network of shipyards, the largest and most capable on the West Coast of the United States, offers a very high degree of flexibility for you as you schedule the work for which we would submit pricing. We would enjoy the opportunity to meet with you and review our ability to respond to your maintenance needs (both scheduled and unplanned) in each of our four full service facilities. We have highly competent craftsmen in each of our shipyards who have demonstrated a high level of dedication and skill which have enabled us to successfully complete many undertakings, both high risk and routine, for a broad array of customers in both commercial and government markets. We have strengthened a high level of responsiveness to our customer base by having available tiger teams who will perform maintenance and repairs while your vessels are underway, when appropriate.

These same people are prepared to perform surveys, ship checks, do project planning and to help you develop work packages while the vessels are out doing revenue generating work. We have the ability to move personnel, equipment, tools supervision and project management between our facilities to meet your most stringent requirements. We have developed special teams which travel between facilities to maximize consistency of "style and responsiveness" to your project teams. We have found this practice builds an enhanced familiarity with your vessels and port engineers. When your fleet operating logistical requirements dictate, we can move your team to any facility to suit your schedule and work requirements.

Because of our scope of activities and range of skills, we can customize our approach to your work with special volume discounts, payment schedules, and adjust our work schedules to accommodate your facility preferences to minimize your total cost and out of service time. We can assure the same high level of workmanship wherever your needs dictate, whenever the need arises. Our preference is to work with you on an annualized basis so as to maximize the amount of planning time we have to make sure we not only give you the lowest possible cost but assure you the minimum yard period per availability. Planning and scheduling and prefabrication require lead time and are enhanced with the annual contract.

We have made certain assumptions which must be considered when you evaluate your cost for our work. These price levels assume certain minimum volumes of activity during an availability. We must also draw attention to minimum quantities of work which are anticipated in our price. Should the work deviate from these quantities the pricing will have to be adjusted, up or down.

Last, but not least, implicit in a pricing matrix is the assumption that we will develop a contract for the work which will be acceptable to both parties. The protection afforded to each of us is important to an ongoing mutually beneficial relationship that will assure you of a flow of work completed as you expect and when you require.

Our 4,000 person financially stable and dedicated organization is ready to discuss your requirements for ongoing maintenance of your fleet.

Please call us at your convenience as questions arise.

Yours very truly,

William H. Zavín, II
Senior Vice President
Commercial Contracting Activities

TO: Herb Engel
FROM: Bill Zavin
DATE: January 24, 1991
SUBJECT: Organizational Outline

In San Diego we have six people, including Vice President for Commercial Contracting Alex Vinck, who also oversees Latin American contracting and market development. He supervises:

Randy Butler, Commercial Account Manager
Larry Horning, Commercial Account Manager
Rosa Maldonado, Executive Secretary
Lucette England, Clerical
Brittain Lewis, Clerical

In San Pedro the commercial contracting group has three people headed by Matthew Spaleta, Vice President for Commercial Contracting. He supervises:

Bogdan Lucev, Commercial Account Manager
Mary Greget, Executive Secretary

In San Francisco Bob Hubbard, Vice President for Commercial Contracting supervises three people:

Paul Gates, Commercial Account Manager
Phil White, Commercial Account Manager
Mike Anderson, Commercial Account Manager (Now resigned, I plan no replacement)

In Portland, we have five Commercial Account Managers:

John O'Donnell
Greg Lind
Gordon Newell
Ralph Mitchell
Hardy Scroggin

In the Corporate segment of Commercial Contracting Activities I am with:

Quintin Watt, Vice President Offshore Business Development
Robin Pearsall, Executive Secretary

These people are all included in my budget as approved. It is my hope to gain your support and approval to use the budget money from one Commercial Account Manager in San Francisco to fund the position which I presented to you yesterday. I am enclosing for your reference the job descriptions I prepared for Mike Adams. I did so in concert with the various Commercial Contracting Vice Presidents involved. I will call you to follow up on this. Thank you.

MEMORANDUM

TO: Paul Johnson
FROM: Bill Zavin
DATE: April 16, 1992
SUBJECT: Due Diligence Items Relating to the Commercial Markets

For your information, I am including with this document some survey information we obtained from International Maritime Associates. The first document is one which was custom prepared for Southwest Marine. It is self explanatory. The second document is an update of similar information which was done for general consumption in the industry. Both volumes have many passages and sections which could be of use to you in preparing substantiation for your projections.

For your additional information, Dick Camacho has compiled a schedule of all U.S. Flag vessels which might qualify to be in our business base. This schedule includes approximate project size as well as vessel description and most importantly the probable next drydocking date. Please feel free to plagiarize any of these three documents in any form. Please feel free also to call upon me to help you with interpretation in any way I can.

It is important to discuss the markets we want to service and the competitive environment in which we compete for this limited amount of business. We must also be constantly evolving a series of strategies to maintain reasonable market share while taking aim at a constantly moving series of targets. Southwest Marine's main commercial market segments have been delineated in the forecast.

The most significant and viable market segment for work in the immediate future is made up of tankers that carry crude oil from Alaska to various refinery locations on the West Coast of the United States. These vessels are commonly grouped with smaller tankers called product carriers that carry refined distillates to other points in the United States. The major players in the Prudhoe Bay Find are British Petroleum, Arco, and Exxon. There are many solid smaller players in that market. They are companies like Union Oil, Shell, Mobil, Texaco and Amerada Hess. The three major players in this market segment each follow their own separate path to moving crude oil from Alaska.

BP Oil, headquartered in Cleveland Ohio as a subsidiary of British Petroleum, operates a relatively complex system to move the most significant amount of crude oil out of Valdez. Because they are a foreign owned corporation, they are prohibited by the Jones Act from carrying this crude oil to U.S. domestic ports. They contract with various shipping companies to carry their crude oil and products for them. These companies are Interocean Management, Keystone Shipping, Marine Transport Lines and certain other smaller one and two vessel size players. The general approach that BP takes is to reimburse the vessel operator for its general average cost of transporting the crude oil plus a profit. The business relationships between BP and their carriers are each different from the other.

The extent to which BP Oil dictates or influences shipyard services decisions for their carriers has a tendency to move around on a random basis. It is important for Southwest Marine to maintain positive supportive relationships with both BP Oil's marine group and the various carriers hired by BP to carry their crude oil. Supporting their ongoing efforts in an interested and constructive way has been the historical key to winning future work. BP has been probably the most influential player in maintaining a very high level of competition between shipyards for tanker repairs. They have been the primary beneficiary of the intramural competition in Portland and the cut throat battles between subsidized Asian shipyards and those of us in the continental United States. The people at BP and its carriers are all very sensitive to personal contact, high levels of service and ongoing relationships.

Exxon Shipping is reputed to be the most cost effective of the three major consumers of Alaska North Slope crude oil. Their more scientific and analytical approach to the management of their own fleet of crude oil and product carriers is reputed to be the best in the industry. By its own definition, Exxon's management structure is somewhat diffuse. It is a very bureaucratic type of structure which is not always easy to approach and service. They have tended in the past to be price buyers and generally got about what they paid for. They have recently changed their approach as a result of major shake ups within Exxon Shipping following the Exxon Valdez disaster. They have indicated that they want to take a far more professional and personal approach to operating and maintaining their fleet. They have indicated to us that price will no longer be the final and major criteria to determining who will do Exxon's ongoing vessel maintenance and modification projects. This series of statements, if true, could be highly beneficial to a responsive, interested and dedicated ship repair network like Southwest Marine.

Arco Marine is the most active and visible of the three major players in the TAPS trade. Their President, Captain Jerry Aspland, is the champion of drilling in the Alaska National Wildlife Refuge. He is also very visible and outspoken on all political matters that relate to vessel construction, operation, safety and maintenance. He is also a licensed tanker captain whose academic and professional background uniquely qualify him to hold both this position at Arco and his preeminent position in the industry. Arco has historically been very interested in utilizing one-on-one relationships for vessel maintenance and modernization. They had a very solid relationship with Dillingham Ship Repair before their company liquidated. They have been the most vocal opponent of any restriction on the utilization of foreign subsidized shipyards for tanker maintenance repair and modification. They have taken public positions in days gone by opposing any requirement that the Oil Pollution Act of 1990 (OPA 1990) might impose on reconstruction of their vessels if the shipyard work is restricted to the United States. Their level of public comment on these restrictions has declined of late.

Our region of the industry has been relying heavily on these three firms basic business base underpinning. They in turn have each extensively utilized foreign subsidized shipyards for large shares of their repair modification and maintenance work. One of the important factors in deciding the amount of business we and our industry will do over the next five years, will be determined by our approach and effectiveness in keeping this relatively static amount of business from going to heavily subsidized Asian shipyards. This is a major lynch-pin to industry and Southwest Marine success.

Southwest Marine and Northwest Marine have historically done significant amounts of negotiated work for Union Oil and its subsidiary West Coast Shipping. We have done considerable work for Shell Oil through Keystone Shipping and Marine Transport Lines. Texaco has been an off and on spot market user of our services. They have recently tended to have their work done on longer term bid contracts. These laundry list approaches to pricing create great opportunities for success and for failure depending on how and by whom they are administered with the shipyard.

As with the larger fleets, these personal relationships are very important. Our company has been attempting to build a relationship with a large non-Jones Act carrier of Valdez crude, Amerada Hess. They carry oil in very large crude carriers to St. Croix for refining. Because St. Croix is a possession, not a State within the United States, they are exempt from the Jones Act. As their work packages have come out, we have been unable to find the necessary estimating capacity to bid on a timely basis for their work. As a result, they continue to utilize Asian shipyards for their service. To date, none of our local competitors have thought of calling upon them for this work.

Southwest Marine's competitive position for tanker work can be assessed from a number of different perspectives. We have historically presented the most competent, capable and flexible full service organization to the industry. Our resources, organizational stability and consistency in the work place have never been equaled in this industry. This position allowed us to do a fair amount of work for a large number of the tanker operators.

We have gotten into some difficult situations in complex projects which has led to some contentious discussions and ultimately difficult financial situations which have required resolution. Our Achilles's Heel after the acquisition of Northwest Marine was price. This was because our organizational unit cost for delivery of tanker work was probably slightly higher than the prevailing domestic market cost presented by Cascade and WSI, who offered far less service to the trade. Our new problem is the perception created that we are "difficult to deal with" and "inflexible" in our dealings with owners.

Our best approach to dealing with the above mentioned impediments to success has been to press with our strengths and attempt to offer into the tanker operator trade a mechanism for negotiated procurement. This mechanism encourages vessel owners to utilize the extensive services and capability available from the Southwest Marine network to help them describe, plan and execute shipyard projects for their fleet. We would utilize our extensive experience in phased maintenance work to help the owner budget and complete work packages. By helping him prepare for these yard periods, we can allow him to look at work packages that have little or no growth. It is the cost of unplanned emergent work which must be dealt with on a very time sensitive basis that creates the price growth this is so difficult to justify and settle. When we assume a role and responsibility in the process, those issues never need to surface. If we had been involved earlier and more extensively in projects like Keystone Canyon and Viking Serenade, the owner and Southwest could have avoided the costly problems in the work place which have led to the problems described above. Negotiated procurements based on high levels of empathy created between the owner and the shipyard lead to low cost projects, high profits for all, and harmony for future procurements.

Cruise ships present similar opportunities and obstacles as do the tankers. The requirements of the owners are different, but every bit as exacting. Almost all of the vessels are foreign flag, so they are not Jones Act restricted. They do however, experience an offsetting loss of revenue by diverting to Asia or Europe to have repairs or modifications done. The value of the vessels to their owners are two to five times as great on a daily basis as the tankers. Due to the limited number of cruise vessels, there are no opportunities for substitution or interchangeability of cargo as there are in the tanker operator's view of the market.

The largest player in the market is Royal Caribbean Cruise Lines. While they claim to be Liberian, they are really a U.S. company who has their maintenance done at ports convenient to their embarkation and debarkation of passengers. They have a relatively modest West coast presence and because of the arbitration between ourselves and them over Viking Serenade, are not a current prospect for future work. The second largest player is Carnival Cruise Lines, owned in essence by Ted and Micky Arison, even though they are publicly traded company. They, with RCCL, are vigorously opposing any attempt to restrict the construction and repair of their vessels to the United States. They are strictly price buyers. We do a little of their work. Our former best customer, Holland America Lines, is a subsidiary of Carnival who now buys strictly on the basis of price.

Our best prospective customer for the future appears to be Princess Cruises, the trade name of P&O Lines in the cruise ship market. They have relatively large work packages because their vessels are older than most in the trade. We are working on furthering our current good relationships with their company. Kloster Cruises will continue to use Southwest Marine as much as possible on the West Coast. Costa Cruises, Crystal Cruises and Chandris Cruises are solid potentials for negotiated procurements with us when they have work on the West Coast.

We have a good working relationship with American Hawaii Cruises who operate two old vessels in Honolulu. Because of the nature of their trade, they are restricted on where they can drydock by the Jones Act. The large project market for refits and upgrades is probably not going to manifest itself for the near term. There is some degree of overcapacity in the market which is being absorbed by price discounting right now. New building of cruise ships and refits are on hold until the current overcapacity is absorbed and price levels return to normal.

Our company is participating in discussions with the World City Corporation for playing a role in the construction of their new 5,600 passenger vessel. This project is still in its planning stage. We may be involved in future construction work for some SWATH hull day cruisers. We have good business relationships with Matson and American President Lines in our San Francisco facility. We will continue to participate actively in their ongoing maintenance.

There is a great deal of intense seasonality to cruise ship maintenance on the West Coast. Almost all the owners want their work done when they change their market. Usually this means May and September. There is not enough drydocking capability to satisfy all those who want to squeeze into these small windows in time. There are far too few customers to keep the drydocks busy outside of those two prime time windows. Our customers have all been inoculated with the same discussions about inflexibility and acrimony as described in the tanker markets. We are developing techniques to offset these discussions. We see several things which must happen to stabilize all five of the markets we attempt to serve. (Tanker, cruise, general cargo, foreign flag and MARAD).

Memo to Paul Johnson
April 17, 1992
Page 5

We must reduce the number of competitors. In Portland, there are too many shipyard providers. WSI continues to sell their services below their cost of delivery. This process has gone on for at least three years and must come to an end. Adequate levels of competition to satisfy even the most aggressive buyers can be created by competition between Cascade and Southwest Marine/Northwest Marine. We have adequate drydocking capability between San Francisco and Portland to effectively service all these markets. We continue to have slight competition from Vancouver B.C. and Seattle. There will, until legislation is enacted to the contrary, be more than adequate competition from overseas to keep prices down in projects from one million to ten million dollars in size. Projects from zero to roughly two million dollars cannot effectively be competed overseas because of the cost of diversion and lost revenue. The larger projects and their price levels make the difference between the good business and one not so good.

If we are able through work on the Jones Act, the Gibbons Bill, keeping work out of Long Beach Naval Shipyard, and other related efforts we will have a decent market in which to sell. Until that time, we must concentrate on eliminating competitors who price their work below their cost. They take large work away from us which could give us the work place stability we need in both San Francisco and Portland to build strong durable profitable organizations with good long term business relationships. Southwest Marine and Northwest Marine's history of taking on the complex projects will allow us opportunity to succeed in the future in the five markets.

We are only beginning to reap the benefits of a strong agency network which we have established in Europe and Asia. We continue to be the leading contender for the City of America project whose magnitude and complexity will rival that of the Viking Serenade project. The big difference will be the amount of planning time and the schedule in which to complete the project. There is a difference between the intensity of 15 weeks and one year.

To: ED

WESTERDAHL -

From:
Bill ZN.

SOUTHWEST MARINE, INC.

Founded 1977

Art Engel, Co-Founder, President, and
Chief Executive Officer

Herb Engel, Co-Founder, Executive Vice President/
General Manager, San Diego

LARGEST SHIP REPAIR YARD ON WEST COAST

(1977-1981) Southwest Marine, Inc., founded by Art, Herb, and David Engel, along with Bill Johnston, has been in operation since 1977. Art Engel, together with his brothers and Mr. Johnston, combined their knowledge and expertise of the repair business to create a \$200 million ship repair company. At the time the eldest of the partners was 30 years old, but each had already gained valuable experience growing up with the business.

The Engel brothers' experience with Triple A Shipyard in San Francisco, founded by their father and uncles, served them well when they started their own venture. In 1977 they pooled their savings and, with Bill Johnston, formed Southwest Marine in Chula Vista, south of San Diego.

The company's first contract was to refurbish U.S. Navy landing craft, and the partners did much of the work themselves. They scraped barnacles from vessels and did a myriad of other tasks to get the job done and get the company off to a good start.

One year later, Southwest moved into San Francisco at Pier 28,

purchasing a yard there to work once again with the U.S. Navy as a major customer.

From 1978 to 1981, Southwest Marine grew to become a solid corporation with the reputation as a major yard in ship repair. A privately held company, it is structured with few managerial layers, to make decisions quickly in a fast moving industry.

(1981-1985) In 1981 the company acquired the former Bethlehem Steel shipyard in Los Angeles Harbor, following its early game plan to expand. The San Pedro division started up with 10 employees. By 1985 it had gone from zero to \$50 million in revenues and an expanded work force of hundreds of people, depending on the size of the jobs in the yard.

Division management points to teamwork applied at all levels as reason for its meteoric success, and notes a close-knit atmosphere in the yard that stems from San Pedro's waterfront flavor that still exists today.

Four years later Southwest Marine continued its expansion program by acquiring a facility in Pago Pago, American Samoa, in its continuing effort to service seagoing vessels from around the world.

The business grew rapidly from scraping barnacles off ships to servicing super tankers of up to 265,000 deadweight tons on 1,500 feet of berthing space at the San Pedro site.

(1986-1989) In the last half of the 1980's, a large amount of Southwest Marine's work was for the U.S. Navy, but also for commercial foreign and domestic ships.

The company's successful expansion efforts stem from a people-oriented philosophy the partners share. Their business plan emphasized from the start the importance of maintaining harmonious labor relations with their employees, providing health and welfare benefits for workers, and holding regular meetings to discuss suggestions, changes of procedures, or other employee concerns.

In April 1989 the company covered more of the West Coast by acquiring the former Northwest Marine Iron Works in Portland, Oregon.

The recently renamed Northwest Marine, Inc. prides itself on the distinction of being the premier tanker and cruise ship repair facility on the West Coast. In addition, it is recognized as the most flexible and capable shipyard on the Pacific Rim. Covering 14 acres and 300,000 square feet within the 125-acre Portland Ship Repair Yard, this full-service ship repair facility provides services ranging from ship overhaul and repair to conversion and modernization.

(present) The San Pedro shipyard, on Terminal Island off Los Angeles Harbor at the mouth of the main channel, prides itself on diversity of projects. As a full-service facility it is capable of dry-docking 95 percent of the world's ships.

A fluid, non-repetitive business, the company fixes things according to the customer's need, using 15 specialized trades to do so, including electricians, pipe fitters, welders, painters, machinists, sheet-metal workers, carpenters, and calibration experts.

Currently the San Pedro division services the U.S. Navy's Wabash and Roanoke (ammunition and oil replenishers), and three landing ships--the Fresno, Racine, and Cayuga. The maintenance, done every 18 months, brings the ships up to material readiness.

The company's first yard, today's San Diego division, is corporate headquarters, with a shipyard on San Diego Bay. It encompasses 20 acres of property and more than 36 acres of water area. With five piers, two dry docks, and three marine railways, the modern facility performs any type of repair or refurbishing.

San Francisco's division, in the hub of the Bay Area's shipping industry, provides pier space and full services for ships of all sizes. The division's place in the world port and proximity to the metropolitan area nearby enhances its ability for fast delivery of parts and accessories from around the world. San Francisco's capabilities also include the second largest floating dry dock on the west coast.

The Samoan division now has two marine railways with capacities of 800 and 3,000 tons. Vessels in dock and alongside the repair berth are serviced by hydraulic land cranes with heavy tonnage capacity and are supplied with all hotel services as well.

SOUTHWEST MARINE, INC/PAGE 5

And the yard has fully equipped shops in machine, electrical, and carpentry capabilities.

A major challenge of the 1990's for Southwest Marine, Inc., is to meet the changing environmental landscape with new techniques and new technologies. Complexities in local, state, and federal regulations have proliferated since the company's founding.

Based on a business that has grown by thirtyfold in a little over one dozen years, Southwest Marine is making a long-term commitment to San Pedro through another 20-year lease with the port.

SUBJECT: Future Commercial Work Statusing

PURPOSE: To record and disseminate status of prospective
commercial work future to management

CUSTOMER: Southwest Marine Management

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1.0 LIST OF REFERENCES

1.1 None.

2.0 LIST OF ENCLOSURES

2.1 (1) Sample Future Work Report

3.0 SCOPE

3.1 This procedure applies to all Southwest Marine Shipyards(SWM). It defines responsibility and methodology for gathering information on the current status and action taken in pursuing prospective future commercial work.

4.0 RESPONSIBILITIES

4.1 The Senior Vice President for Commercial Activities (SVPCA) or his designated representative (DR) is responsible for implementing this procedure immediately.

4.2 All General Managers (GM), Commercial Account Managers (CAM), and other employees will be responsible to inform, in writing, the SVPCA/DR of every contact with the customer including any information discussed that could effect the company's potential future commercial work.

5.0 PROCEDURE

5.1 The SVPCA/DR will maintain a list of potential future commercial work as depicted in enclosure (1).

5.2 As information is gathered from customers or other sources, the person receiving the information will transmit it to the SVPCA/DR by Thursday of each week.

5.3 Information, such as the following, that is pertinent to the future commercial work list. The objective is to present a clear view of the market and what SWM is doing to acquire the new business.

- 5.3.1 (a) New future jobs
- (b) Schedule of jobs (including bid dates)
- (c) Estimate of total hours
- (d) Change in schedule or estimated hours
- (e) Job content
- (f) Market requirements to better our chances of obtaining the work
- (g) People responsible in writing specifications
- (h) Port Engineer that will manage the job

- (i) Other information as deemed appropriate
- (j) Sales calls made in conjunction with specific jobs

5.4 The SVPCA/DR will distribute the "Future Work List" weekly on Friday to a distribution approved by the President. The list is to be marked with a "Need to Know Only" stamp.

ATLANTIC SHIP BROKERS

1851 W. INDIANTOWN RD.
SUITE 204
JUPITER, FLORIDA 33458
TEL 407-575-0445
TOLL FREE 800-525-4138
FAX 407-575-4639
TELEX 6815189 ATSHIP

August 1, 1991

RE : FLOATING DRYDOCKS - CURRENT MARKET REVIEW

In the sale of real estate it is said that there are three important considerations, LOCATION - LOCATION - LOCATION. The same might be said about selling Floating Drydocks except it is, TIMING - TIMING - TIMING.

Seven months ago Todd Shipyards at Galveston sold their Big "T" (40,000 tons lifting capacity built in Japan, 1982) for \$13.1 million to Atlantic Marine of Mobile under TIME pressure to generate the required cash needed to come out of bankruptcy. Six months later, and after trying for two years, Jacksonville Shipyards sold their JAX PRIDE (30,000 tons lifting capacity built Germany, 1983) and JAX MAC (33,000 tons lifting capacity built Germany, 1972) for an enbloc price of \$28.8 million. Although no breakdown has been given on pricing of the two Drydocks, one can estimate a \$6.0 million spread giving the JAX PRIDE a value on the low side of about \$17.0 million and the JAX MAC on the high side of about \$11.8 million. One might surmise that Todd gave up at least \$4.0 million because of TIMING - TIMING - TIMING.

The buyer of the Jaxship's Drydocks is the Arab Shipbuilding & Repair Yard Co. ("ASRY") of Bahrain. ASRY had planned to build a Panamax graving dock but because of the recent increase in docking requirements after the Gulf War they turned their attention to the purchase of a suitable Floating Drydock. It is reported that ASRY only wanted one Drydock but Jaxship held to their position of two or none and in the end ASRY decided that they could use two Drydocks. The Drydocks are scheduled to depart Jacksonville within the next thirty days.

Another interesting sale of a major Floating Drydock is the reported commitment of Versatile Pacific Shipyards' 36,000 ton lifting capacity Drydock located at Vancouver to Far East buyers. The Drydock which was built in Japan in 1981 is said to be sold for Canadian \$14.8 million (about US\$12.8 million) which, if the price is right, is very low when compared to the sale of the JAX PRIDE. The sale is subject to the approval of the government of British Columbia.

We enclose our current list of Floating Drydocks available for sale and would take this opportunity to advise you that strong buying interest for Floating Drydocks remains from shipyards throughout the world. If you have a Floating Drydock available for sale or a requirement to purchase one, please contact Atlantic Shipbrokers.

Howard F. Yaffe
Director

NWMAR131113

ATLANTIC

SHIP BROKERS

1851 W. INDIANTOWN RD.
SUITE 204
JUPITER, FLORIDA 33458
TEL 407-575-0445
TOLL FREE 800-525-4138
FAX 407-575-4639
TELEX 6815189 ATSHIP

AUGUST 1, 1991

FLOATING DRYDOCKS FOR SALE (SECONDHAND AND NEW BUILDING)

| ID NO | LOCATION NAME | LIFTING CAPACITY (TONS) | LOA BEAM IN/OUT (M) | YEAR BLT | CRANES (NO/TONS) | DEPTH OVER BLOCKS (M) | PRICE |
|-------|---------------------------|-------------------------|----------------------|----------|------------------|-----------------------|-----------------|
| 01 | USEC | 900 | 38.1 15.2 18.3 | 1969 | NONE | | \$500,000 |
| 02 | DENMARK | 1000 | 45.3 10.7 15.0 | 1980 | NONE | 3.5 | \$1.2 M |
| 03 | SOUTH AFRICA | 1000 | 62.8 13.7 19.2 | 1968 | NONE | 5.6 | \$750,000 |
| 04 | EUROPE | 1000 | 56.0 11.0 17.2 | 1936 | NONE | 4.6 | INVITING OFFERS |
| 05 | EUROPE | 1100 | 69.2 14.0 -- | 1960 | NONE | -- | \$500,000 |
| 06 | BRAZIL NEWBUILDING RESALE | 1200 | 70.0 18.0 -- | 1990 | NONE | | \$2.0 M |
| 07 | EAST MED | 1360 | 63.0 18.2 22.4 | 1978 | NONE | 5.0 | \$2.0 M NET |
| 08 | DENMARK | 1500 | 62.5 14.0 19.0 | 1940 | NONE | 4.8 | DKK 8.0 M |

FLOATING DRYDOCKS FOR SALE (SECONDHAND AND NEW BUILDING)

| ID NO | LOCATION NAME | LIFTING CAPACITY (TONS) | LOA BEAM IN/OUT (M) | YEAR BLT | CRANES (NO/TONS) | DEPTH OVER BLOCKS (M) | PRICE |
|-------|-----------------------|-------------------------|-----------------------|-------------|------------------|-----------------------|----------------------------|
| 09 | EUROPE | 1500 | 90.0 13.0 20.0 | 1936 | 1/2.5 | 5.3 | \$900,000 |
| 10 | EUROPE | 1500 | 62.5 14.0 19.0 | 1966 | NONE | 4.8 | \$1.3 MILL |
| 11 | JAPAN | 1600 | 80.2 18.0 22.0 | 1985 | 2/4 | 4.3 | \$2.8 MILL |
| 12 | NORWAY | 1800 | 48.0 19.0 23.8 | 1946 /75 | NONE | 5.5 | \$650,000 TRY LESS |
| 13 | EUROPE | 2000 | 81.0 14.6 21.0 | 1946 | 1/6 | 5.0 | INVITING OFFERS |
| 14 | DENMARK (ENCLOSED) | 2300 | 87.5 18.0 24.9 | 1956 /87 | | 5.2 | INVITING BEST OFFERS |
| 15 | ITALY | 2750 | 115.0 15.3 22.0 | 1940 | 1/10 | 5.5 | \$2.7 M NET |
| 16 | ITALY | 2800 | 96.0 18.6 22.8 | 1987 | 2/4 | 5.5 | \$5.5 M NET |
| 17 | HOLLAND | 2900 | 92.0 15.0 20.5 | 1941 /61 | N/A | 6.0 | IDEAS EXCESS \$1.0 M |
| 18 | SICILY | 3000 | 120.0 18.5 22.5 | 1974 | 2/2.5 | 6.5 | \$4.0 M NET |
| 19 | NORTH EUROPE | 3500 | 108.0 15.8 23.0 | 1938 /76 | 1/3 | 5.8 | DM 1.1 M |

FLOATING DRYDOCKS FOR SALE (SECONDHAND AND NEW BUILDING)

| ID NO | LOCATION NAME | LIFTING CAPACITY (TONS) | LOA BEAM IN/OUT (M) | YEAR BLT | CRANES (NO/TONS) | DEPTH OVER BLOCKS (M) | PRICE |
|-------|--------------------------------|-------------------------|-----------------------|--------------------|------------------|-----------------------|-------------------------------------|
| 20 | USGULF | 3600 | 71.0 25.6 28.7 | 1975 /81 | NONE | -- | \$800,000 PRESENTLY COMMITTED |
| 21 | GERMANY | 3800 | 100.0 24.0 31.6 | 1941 /79 /87 | 1/6 1/5 | 5.5 | \$3.7 M NET |
| 22 | POLAND | 3800 | 117.5 19.8 28.4 | 1975 | 2/5 | 5.2 | \$3.5 M |
| 23 | USGULF | 4000 | 48.8 36.6 41.4 | 1980 | NONE | 9.1 | EXCESS \$2.0 M |
| 24 | EUROPE | 4000 | 116.0 21.6 30.1 | 1988 | NONE | 5.8 | \$5.5 M |
| 25 | FINLAND CONCRETE PONTOON | 4500 | 116.0 19.7 28.0 | 1988 | 2/5 | 6.1 | EXCESS \$4.5 M UNDER OFFER |
| 26 | FINLAND CONCRETE PONTOON | 4500 | 116.0 19.7 28.0 | 1974 | 2/5 | 6.1 | TRY OFFERS |
| 27 | SPAIN | 4500 | 100.0 24.0 31.2 | 1945 /85 | 1/6.5 1/8 | 7.0 | REGION \$3.0 M |
| 28 | EUROPE | 5000 | 127.0 22.4 29.0 | 1970 | 2/5 | 5.8 | TEMPOR- IZING |
| 29 | INDONESIA | 5000 | 128.0 21.0 28.5 | 1963 | 2/3 | 7.0 | BEST OFFERS |

FLOATING DRYDOCKS FOR SALE (SECONDHAND AND NEW BUILDING)

| ID NO | LOCATION NAME | LIFTING CAPACITY (TONS) | LOA BEAM IN/OUT (M) | YEAR BLT | CRANES (NO/TONS) | DEPTH OVER BLOCKS (M) | PRICE |
|-------|--|-------------------------|----------------------------|-----------------------|------------------|-----------------------|----------------------------|
| 30 | EUROPE | 5000 | 127.0 20.5 -- | 1958 | 2/5 | 5.0 | \$2.9 M |
| 31 | FAREAST | 6000 | 158.0 25.0 34.2 | 1991 | 2/- | | INVITING BEST OFFERS |
| 32 | NEWBUILDING RESALE CONCRETE PONTOON | 7000 | 155.0 23.4 32.4 | 1991 | 2/5 | -- | TRY BEST OFFERS |
| 33 | FAR EAST | 8000 | 156.0 24.0 --- | 1955 | 2/5 | 6.5 | \$3.5 M |
| 34 | USEC | 8000 | 114.6 29.3 37.8 | 1944 /89 | 1/15 | 8.5 | REGION \$2.5 M |
| 35 | SWEDEN | 8000 | 145.7 23.8 -- | 1946 | 1/10 | 6.4 | SK 12.0 M TRY OFFERS |
| 36 | EUROPE | 8000 | 161.2 29.0 26.8 | 1979 | 2/12.5 | 7.5 | TRY \$7.0 M |
| 37 | U.K. | 8000 | 137.2 18.9/20.7 29.1 | 1957 /85 | 2/7.5 | 6.4 | BEST OFFERS |
| 38 | NORTH EUROPE | 8200 | 161.2 36.8 --- | 1979 | 2/12.5 | 7.5 | MIN \$7.0 MILL |
| 39 | FINLAND CONCRETE PONTOON | 8500 | 155.0 23.4 32.4 | 1980 NEVER USED | NONE | 6.7 | \$4.0 M UNDER OFFER |

FLOATING DRYDOCKS FOR SALE (SECONDHAND AND NEW BUILDING)

| ID NO | LOCATION NAME | LIFTING CAPACITY (TONS) | LOA BEAM IN/OUT (M) | YEAR BLT | CRANES (NO/TONS) | DEPTH OVER BLOCKS (M) | PRICE |
|-------|-----------------------------|-------------------------|-----------------------|-------------|-------------------|-----------------------|-----------------------------|
| 40 | CANADA | 9500 | 95.0 27.4 34.0 | 1983 | 2/10 | 7.5 | \$7.5 M |
| 41 | USEC (WOOD PONTOON) | 10000 | 141.2 28.2 36.4 | 1914 /80 | 1/16 | | WOULD TRY TO DEVELOP |
| 42 | EUROPE | 10500 | 175.2 26.4 33.5 | 1920 | 1/7 1/3 | 6.2 | INVITING BEST OFFERS |
| 43 | SWEDEN | 10800 | 176.5 25.6 32.8 | 1955 | 2/7.5 | 7.5 | \$2.75 M |
| 44 | CARIBBEAN | 11200 | 154.0 25.6 34.2 | 1967 | 1/10 1/20 | 8.2 | TRY TO DEVELOP |
| 45 | GERMANY | 11300 | 176.5 27.0 34.2 | 1959 | 2/10 | 7.5 | WILL SELL IF REPLACED |
| 46 | TAIWAN | 11500 | 174.0 30.0 37.0 | 1976 | 1/20 SHORESIDE | 7.6 | TEMPOR- IZING |
| 47 | ENGLAND | 12000 | 160.0 15.5 24.7 | 1960 | 2/7.5 | | TRY BEST OFFERS |
| 48 | ITALY | 12000 | 176.5 25.6 32.8 | 1959 /90 | 2/7.5 | 7.5 | REGION \$7.0 M |
| 49 | N. FRANCE | 13000 | 170.2 27.7 34.7 | 1931 | 2/10 | 7.4 | INVITING BEST OFFERS |
| 50 | NEW- BUILDING GERMANY | 13200 (MAX 15000) | 180.0 34.0 41.8 | N/A | 2/12.5 | 7.5 | ABT \$18.0 M |

FLOATING DRYDOCKS FOR SALE (SECONDHAND AND NEW BUILDING)

| ID NO | LOCATION NAME | LIFTING CAPACITY (TONS) | LOA BEAM IN/OUT (M) | YEAR BLT | CRANES (NO/TONS) | DEPTH OVER BLOCKS (M) | PRICE |
|-------|--------------------------------|-------------------------|-----------------------|-------------------------------|------------------|-----------------------|---|
| 51 | SOUTH AMERICA | 15000 | 195.0 35.2 42.0 | 1979 | 2/15 | | TRY \$15.0 M NET |
| 52 | EUROPE | 15000 | 151.5 27.0 34.2 | 1964 | 1/8 | 4.3 | NOT KEEN TRY \$3.5 MILL |
| 53 | GERMANY | 16000 | 180.0 35.4 41.8 | 1986 | 2/12.5 | 7.5 | DM 29.0 M |
| 54 | NEW-BUILDING RESALE USSR | 17000 | 195.0 31.5 44.0 | EX-YARD 1991 | NONE | 8.5 | UNDER OFFER |
| 55 | NEW-BUILDING | 18000 | 210.0 36.0 -- | 15 MON FROM CONTRACT | 1/15 1/5 | | \$22.0 M |
| 56 | NEW-BUILDING POLAND | 20000 | 207.0 33.5 45.0 | EX-YARD 1993 | 2/15 1/10 | 8.5 | ASKING \$31.7 M |
| 57 | CUBA | 22000 | 227.0 37.0 45.0 | 1975 | 3/21 | 8.0 | \$20.0 M NET |
| 58 | SWEDEN (DAMAGED) | 24000 | 212.0 32.6 44.5 | 1912 | 2/15 | 8.8 | TEMPOR- IZING |
| 59 | GERMANY B&V | 25000 | 217.0 31.8 42.9 | 1911 /74 | 1/10 | 9.2 | TRY DM 20.0 M NOT KEEN |
| 60 | SWEDEN | 28000 | 217.0 30.5 40.5 | 1954 | 2/12 | 8.5 | OFFERS INVITED REGION \$3.0 MILL |

FLOATING DRYDOCKS FOR SALE (SECONDHAND AND NEW BUILDING)

| ID NO | LOCATION NAME | LIFTING CAPACITY (TONS) | LOA BEAM IN/OUT (M) | YEAR BLT | CRANES (NO/TONS) | DEPTH OVER BLOCKS (M) | PRICE |
|-------|-----------------------------|-------------------------|----------------------------|-----------|------------------|-----------------------|----------------------------------|
| 61 | ITALY | 28000 | 213.0 37.0 | 1961 | 2/10 | -- | NEED INDICATION TO DEVELOP |
| 62 | FAREAST NEWBUILDING | 36000 | 254.0 48.0 58.0 | 16 MONTHS | 1/15 1/5 | 9.5 | ABOUT \$27.0 M |
| 63 | CANADA | 36000 | 221.0 45.0 59.0 | 1981 | 1/15 1/85 SHORE | 10.65 | UNDER OFFER |
| 64 | ITALY | 40000 | 265.0 41.8/43.0 51.7 | 1970 | 2/12 | 9.5 | INVITING BEST OFFERS |
| 65 | GERMANY NO. 11 | 50000 | 320.0 52.0 63.6 | 1977 | 2/35 | 10.0 | TRY TO DEVELOP AT DM 70 MILL NET |
| 66 | SWEDEN | 55000 | 303.0 55.0 | 1976 | 1/120 2/15 | 9.2 | NOT KEEN, TRY \$40 MILL |
| 67 | NEW-BUILDING ITALY CONCRETE | 100000 | 350.0 63.7 | N/A | 2/25 | 10.0 | TRY \$10.0 M DELIVERY 6 MONTH |

+ + + + +

MEMORANDUM

TO: Distribution

FROM: George Riddle

DATE: December 6, 1991

SUBJECT: S.S. NORTHERN LIGHTS...MIDBODY

Please find the attached specifications pertaining to the lengthening of the above vessel.

I have blocked certain paragraphs, which I believe we should take a close look at, since I think these are high risk areas.

The current bid opening is scheduled for January 17, 1992, and we have asked for a month's extension....should know soon if this becomes real

The Owner has tentatively set a redelivery date of December 1, 1992 and a rough cut of the major milestone schedule is also attached for your information (we submitted this to Tote (per their request) as part of our bid extension request.

For developing a price for the construction of the midbody, we are asking Gunderson and our SWM San Francisco Division for prices and also developing an in-house price at the same time.....Ed Eckelhoff will spearhead this for NWM.

I suggest we get together on December 13 for a short meeting to discuss progress...say at 2:00 PM....please confirm if this time is OK

Thanks, George

Distribution:

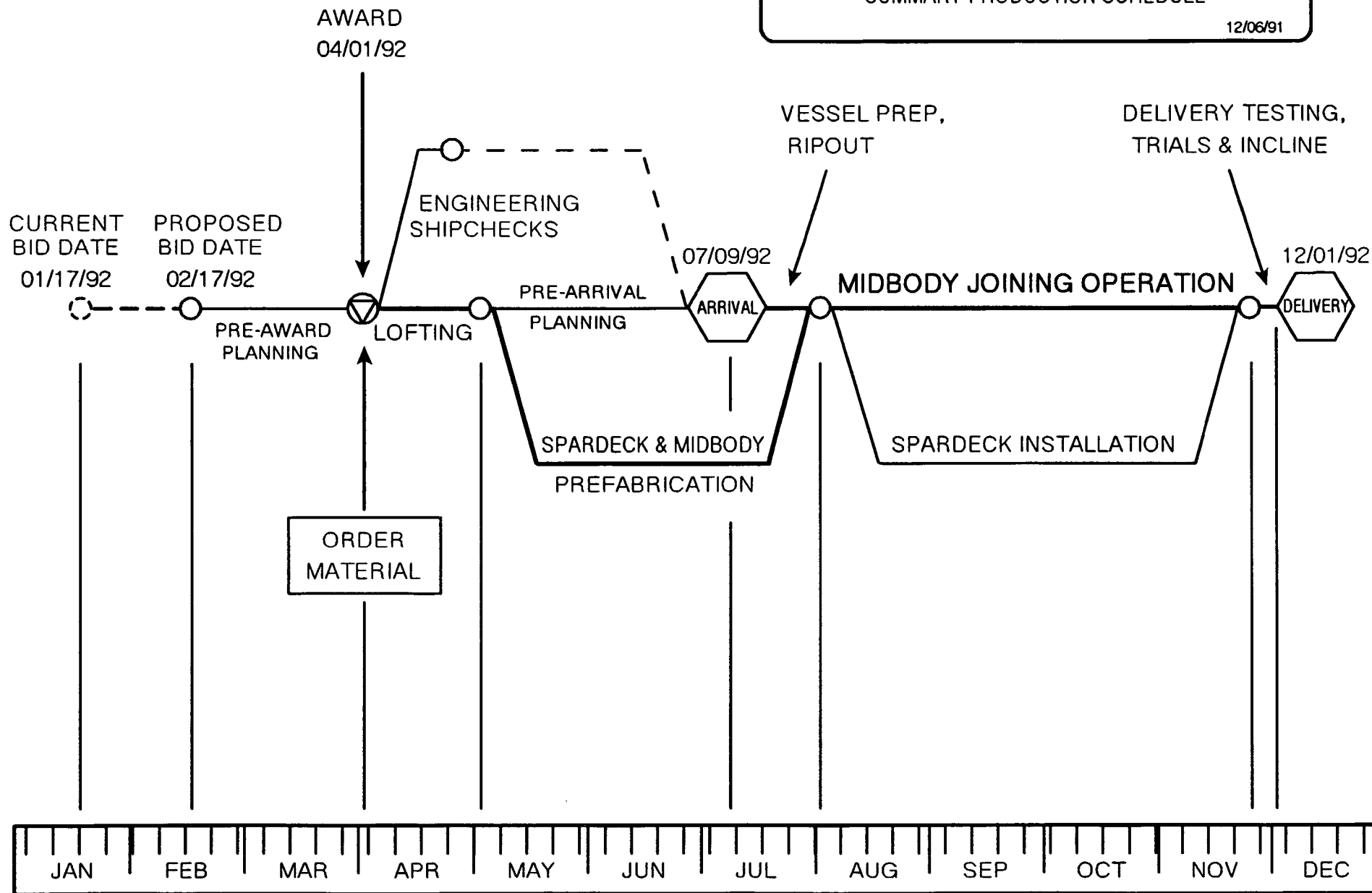
Bill Dunbar
Ed Eckelhoff
Bill Johnston
Don Nugent
Carl Perrino
Mike Luzinski
Bill Zavin

NORTHWEST MARINE

S/S NORTHERN LIGHTS

MIDBODY CAPACITY PROJECT
SUMMARY PRODUCTION SCHEDULE

12/06/91



MARKED UP COPY

TOTEM OCEAN TRAILER EXPRESS

(TOTE)

500 Alexander Avenue

Tacoma, WA 98421

SPECIFICATIONS

for

CONVERSION

of

S.S. "NORTHERN LIGHTS"

H.T. McVey & Associates

P.O. Box 276

Malvern, PA 19355

November 12, 1991

PROPRIETARY INFORMATION

The information presented in this Specification and accompanying drawings is proprietary information and may not be copied or used by third parties without the express consent and authorization of both TOTEM Ocean Trailer Express (TOTE) and H.T. McVEY & ASSOCIATES. It has been adapted for the exclusive use of TOTE in lengthening the SS "NORTHERN LIGHTS", Sun Hull 670, Official No. 561 732.



TOTEM OCEAN TRAILER EXPRESS, INC.

S/S NORTHERN LIGHTS

Vessel Characteristics

| | |
|--------------------------|---------------------------------|
| Official Number | 561732 |
| Home Port | Wilmington, Delaware |
| Builder | Sun Shipbuilding & Dry Dock Co. |
| Built | January 1975 |
| Net Tonnage | 8,928 NRT |
| Gross Tonnage | 14,770 GRT |
| Deadweight | 14,090 LT |
| LOA | 700'-0" |
| LBP | 643'-0" |
| LWL | 660'-0" |
| Beam (Molded) | 92'-0" |
| Beam (At Main Deck) | 105'-0" |
| Depth To Main Deck | 60'- 1-5/8" |
| Depth To Second Deck | 42'- 1-5/8" |
| Depth To Third Deck | 24'- 1-5/8" |
| Full Load Draft | 28'- 1-1/8" |
| Full Load Displacement | 25,350 LT |
| Freeboard Deck | Second Deck |
| Lightship Displacement | 11,260 LT |
| Lightship VCG Above B.L. | 38.19' |
| Lightship LCG From A.P. | 267.40' |

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SECTION I - GENERAL REQUIREMENTS

1.0 INTENT

It is the intent of these Specifications to describe the modifications to the S.S. "Northern Lights." Sun Hull 670, necessary to increase the length, add a Spar Deck as well as special features for Alaska service.

The major aspects of the modifications include the following additions and modifications:

- (1) A new midbody, 90'-0" long with new access ramp.
- (2) A new Spar Deck, 190'-0" long with new access ramp.
- (3) A new W.T. Door at bottom of existing ramp into No. 5 'Tween deck. (Optional pricing)
- (4) Extend Hull Systems through new midbody. such as fire bilge and ballast, fuel oil transfer, sprinkling, electrical power and lighting.
- (5) Provide cargo hold ventilation in new midbody.
- (5A) Provide cargo hold ventilation in aft ramp space.
- (6) Provide roloc buttons, lashing fittings and corresponding underdeck reinforcements throughout new midbody and Upper Deck.
- (7) Main Deck modifications in way of ramp openings.
- (8) Provide and install new motor driven bilge and ballast pump, fire pump and fire and general service pump.
- (9) Modify existing ship, relocate equipment as necessary and add the following special features for Alaska service:
 1. Portside handling of Shore Ramp, midship to the Main Deck.
 2. Portside-to mooring at Anchorage.
 3. Additions and modifications to De-Icing systems.
 4. Modifications to Hold ventilation and Second Deck vehicle side-port forward opening, starboard side.

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| Above listing is not all-inclusive; other modifications and additions are to be found throughout these Specifications. |
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It is not the intent of these Specifications to cover any work of a repair nature to the hull, machinery, or electrical installation.

1.1 DEFINITIONS

"Operator" or "TOTE" or "OWNER" means TOTEM OCEAN TRAILER EXPRESS or its authorized representative(s).

"Contractor" or "Shipbuilder": is the party, or its authorized representative(s), that has entered into a contract to perform the work specified herein.

"Contract" means the Contract executed between the Contractor, Vessel Owner, and TOTE for the lengthening of the Vessel

"Vessel" refers to the S.S. "NORTHERN LIGHTS". Official Number 561732, Sun Hull No. 670.

"Good Shipbuilding Practice" means the performance of the work specified herein to soundly conceived and engineered detailed plans, prepared by the Contractor, incorporating the specified features and components so as to meet detailed specification requirements utilizing construction and testing methods to endure that the completed work will conform to the Operator's intent. Inspection by the operator is for the purpose of verifying the proper function of the Contractor's quality assurance measures and is not to be used as a substitute for in-process control of quality by the Contractor.

The term "or equal" means applicability of the "or equal" component, subject to approval by the Operator, where its installation does not adversely affect any other part or system in the Vessel and where total performance of the "or equal" component enables it to function as effectively with no increase in installed cost, required maintenance or need for premature replacement. Other factors to be considered in selecting an "or equal" component shall be efficiency, reliability, comparable experience in the marine industry, size, and weight, depending upon their relative importance in each installation.

"As approved" or "subject to approval" means the approval of the Operator or its authorized representative(s) and, as required, the approval of the regulatory bodies listed in 1.3 below.

1.2 GENERAL SPECIFICATIONS REQUIREMENTS

The lengthening and modifications specified herein shall be done in compliance with all Rules, Regulations, etc. set forth in Article 1.3 of this section. The Contractor shall review the design arrangements and details and confirm their suitability for the purpose intended and shall be responsible for the conversion, using good shipbuilding practice in a manner that will result in a complete and seaworthy ship.

In the event there are any errors or omissions in the Specifications or in the accompanying Contract and Guidance

Plans that would affect the outcome of a complete and seaworthy ship in accordance with good shipbuilding practice, the Contractor shall correct such errors or omissions as part of the Contract work with no increases in Contract price or delays in Deliver. Any item mentioned in the Specifications and omitted from the Contract or Guidance plans, or shown on the plans and omitted from the Specification shall be considered as embodied in both. In the event of conflict the Specification shall govern.

It shall be the Contractor's responsibility to determine and provide for structure, equipment or system changes or modifications required for the longer Vessel, whether specified herein or not. Same shall be provided at no extra cost to the Operator.

A nearly full set of working drawings for the conversion will be furnished by TOTE together with master plan schedule. Any omissions to those plans will be handled separately.

The Vessel shall be delivered by the Operator to the Contractor, at the Contractor's Yard, as provided for in the Contract, at a mutually agreed and satisfactory date.

Contractor shall pre-fabricate new midbody, Spar Deck, structural members, etc., so as to minimize the Vessel's stay at the Yard.

1.3 LAWS, CLASSIFICATION, RULES, REGULATIONS, STANDARDS AND CERTIFICATES

The ship, as delivered, shall comply with all the applicable laws of the United States of America and requirements and standards of the various Regulatory Bodies and other organizations noted in the individual specification sections below:

- (a) American Bureau of Shipping, "Rules for Building and Classing Steel Vessels," including all requirements for classification as +A E, +AMS.
- (b) All applicable United States Coast Guard regulations for Ocean service Cargo ship, including special requirements for the carriage of vehicles with fuel in their tank.
- (c) United States Public Health Service including Publication No. 393, "Handbook on Sanitation of Vessel Construction," and U.S. Public Health Service/Maritime Administration Joint Publication No. PB 161019, to entitle ship to receive Deratization Exemption Certificate of Sanitary Construction.
- (d) International Convention for Safety of Life at Sea, 1974 including 1978 Protocol and 1981/1983 Amendments.

- (e) United States Admeasurement for Tonnage Certificates, USCG.
- (f) International Loadline Convention, 1966.
- (g) MARPOL, 1973, as updated by 1978 and 1983 Protocols and Amendments.
- (h) IEEE No. 45, "Recommended Practice for Electric Installations on Shipboard."
- (i) Federal Communications Commission.
- (j) Cargo Gear Certification Requirement of American Bureau of Shipping including International Labor Organization Rules for Testing and Labeling.
- (k) Merchant Marine Act of 1920 (Jones Act).
- (l) ASHRAE Standard 26-23 (ANSI B59.1), "Recommended Practice for Mechanical Refrigeration Installations on Shipboard."
- (m) International Rules of the Road (IMO, 1974).
- (n) American Standard Safety Code for Elevators.
- (o) Maritime Administration "Schedule for Pipes, Joints, Valves, Fittings and Symbols, M.A. Plan No. S48-26-2, latest revision.
- (p) American National Standards Institute - ANSI.
- (q) International Regulations for Preventing Collisions at Sea (1972 COLREGS).

These Specifications do not cover any shipboard features requiring updating to conform to the above regulations; nevertheless, it shall be the responsibility of the Contractor to survey the vessel and to the extent updating is a mandatory requirement for the converted vessel, include these items in his bid. Contractor shall pay special attention to review vessel's current features in the areas of communications, steering, navigation, navigation lights, pollution abatement, intact and damaged stability, etc.

The latest amendments to the above laws, regulations, rules and conventions, in force at time of Contract signing, are to be considered as part of the Contract. Any amendments to such requirements or any new laws, regulations, rules or conventions, which come into force after Contract signing, shall be treated as a change to the Contract if not otherwise covered by these Specifications and Contracts plans.

All fees for classification, including testing and certification of material and documents furnished by the Contractor, shall be borne by the Contractor.

All necessary certificates and documents indicating compliance with the foregoing requirements, including Builder's Certificates, Classification and Tonnage Certificates, and/or any that may be required because of consideration being given of the work specified herein as a "major conversion," shall be obtained by the Contractor at his expense and furnished to the Operator in triplicate (one executed original and two executed copies) on or before delivery of the Vessel. Should any certificate or document not be available at the time Vessel is delivered to Operator,

the Contractor shall obtain and furnish such temporary certificates in lieu thereof as will serve the needs of the Operator until the permanent certificates are available. Those certificates and documents which are required to be mounted or framed aboard ship, shall be mounted by the Contractor under plexiglass in metal frames and installed in approved locations.

1.4 WEIGHT, CENTER OF GRAVITY, STABILITY AND SUBDIVISION

Within ninety (90) calendar days after date of award, the Contractor shall submit for approval an independently prepared estimate of light ship weight and center of gravity. This estimate shall describe the weight and center of gravity of the converted ship in comprehensive detail.

Approval action shall consist of reaching a mutual agreement between the Contractor and the Operator as quickly as possible on the light ship weight and center of gravity. Thereafter, the Contractor shall be responsible for obtaining in the converted Vessel the approved weight and center of gravity characteristics adjusted for authorized departures from the modifications contemplated in the approved weight estimate.

Departures from the modification contemplated in the approved estimate which: affect the light ship weight and center of gravity shall not be undertaken until the Contractor has submitted to the Operator his estimate of the effect on weight and center of gravity of the ship, and obtained written approval to proceed with the departure. Departures, the total effects of which change any weight group by less than 500 pounds, may be considered negligible and will not require written approval with respect to weight.

The ship shall meet all applicable SOLAS and U.S. Coast Guard Rules for stability and subdivision. Vessel shall comply with all requirements for one(1) compartment subdivision.

A stability test on the ship, as required by the U.S.C.G., shall be performed by the Contractor at his expense. The Contractor shall prepare, secure Regulatory Body approval for, and submit to the Operator the report of center of gravity together with calculations of trim and stability adequately covering the full range of operating condition. The conversion of the Vessel at the time of the inclining experiment shall be as complete as possible. As much extraneous yard equipment (such as staging, tools, or other heavy items) as possible shall be removed from the ship prior to the experiment.

Tankage at the time of the experiment shall be held to an absolute minimum and fuel oil shall be restricted to two tanks in addition to the settling tanks.

Liquids in tanks that are not pressed up shall be at a level that permits accurate determination of the free surface of the liquid.

A deadweight certificate shall be prepared by the Contractor for the ship based on the date obtained from the approved stability test.

Based on the results of the stability test, the Contractor shall prepare a stability booklet which sets forth the stability data necessary to permit safe and efficient handling of the ship. The booklet shall include an indication of any operating conditions which must be maintained to assure that the ship will safely withstand damage. These instructions shall be as clear and concise as practicable and shall be approved by the U.S. Coast Guard.

A loading manual covering the feasible range of loading for cargo and ballast shall be developed for the guidance of the Owner and to ABS approval, as required.

A functional Operating Guidelines Booklet shall be prepared using the Trim and Stability and loading Manuals which shall indicate to the Operator any limitations in cargo weight distribution, fuel oil bunkering quantities, liquid ballast distribution and other factors pertaining to and which may limit the Vessel's application to its specific cargo transportation mode.

1.5 ACCESS & MAINTENANCE REQUIREMENTS

The structure and layout of the machinery and equipment shall be designed and constructed to permit ready access to all parts for operation, inspection, maintenance and repair without disturbance of other structure or equipment. Permanent ladders, doors, manholes, scuttles, bolted plates, etc., shall be provided as required for access. Battens and gratings in storerooms and other spaces and protective casings around pipes shall be made readily removable.

Vertical access shall be offset at every deck or more often if deck height exceeds 20 feet. Restriction of access openings by pipes, valves, and heating coils shall be avoided and ladders shall be located in line with openings above. All trunks, casings, etc., shall be large enough to facilitate servicing of piping, manifolds, etc. Access to new cargo spaces shall be provided to new midbody if not already available, or as specifically required herein.

Provisions shall be made for the disassembly and removal of equipment parts which may consist of area of decks, bulkheads, etc., so arranged that when a section designated for this purpose and so designated on working plans is removed, the remaining structure will be self-supporting.

1.6 INSPECTION AND APPROVALS

The Vessel shall be modified and equipped under the inspection, supervision, and subject to the approval of the Operator and/or his authorized representative(s). The Operator's representative(s) shall be afforded every facility for inspecting the material and workmanship entering into the Vessel and shall be furnished with an adequately maintained office, conveniently located in the Contractor's yard, which shall be fully equipped with desks, chairs, drawing board, file cabinets, telephone, lockers, typewriters, photocopy machine, and toilet and shower facilities.

All work being accomplished under the Contract shall be open to inspection at all sites of work at all times. The Operator's representatives shall be advised in every particular, as to the Contractor's program of work and the methods which the Contractor intends to pursue, in order that the interests of the Operator may be adequately protected. These representatives shall have the authority to reject any material or workmanship whenever found defective, unsuitable, not in conformity with best shipbuilding practice, or not in accordance with the Contract plans and Specifications or with approved working plans. Satisfactory correction and/or replacement of any rejected item shall be accomplished by the Contractor at his expense.

Design plans, working drawings, calculations, purchase specifications, vendor plans, shall be submitted for approval by the Operator for compliance with the Specifications. Working drawing change notices and pipe details shall be submitted for record and file only.

1.7 MATERIALS AND WORKMANSHIP

All material, machinery and equipment shall be suitable for the marine service intended, and spare parts and service shall be readily obtainable.

All material, unless otherwise specified herein, shall be of commercial quality conforming to A.S.T.M. Federal, Military, S.A.E. or other recognized specifications and shall be so designated in bill of material on plans.

Where Military, Federal, A.S.T.M., or similar specifications are referred to herein, the latest revision in effect 30 days prior to the date of execution of the contract (in the case of a negotiated contract), or 30 days prior to the date of bid opening (in the case of a competitive bid contract) shall be applicable unless otherwise indicated. Military and Federal specifications packaging requirements are not applicable, and the sampling, inspection and test requirements listed therein may be limited to those used by the manufacturer's control procedure to equal the quality required under these specifications.

Ductile iron in accordance with ASTM A395, A445, A536 Grade 60-40-18, or Military Specification MIL-I24137, Class A, may be used as an alternate for steel where applicable.

The overweight tolerance of steel members shall be within limits defined by specifications of the American Society for Testing and Materials, Underweight tolerances shall not exceed ABS limitations.

All machinery, structure, and outfit, shall be designed to withstand the resultant forces from the following ship conditions:

30° roll each side - period 15 seconds (full cycle)

6° pitch bow up to bow down - period 6 seconds (full cycle)

15° list either side

3-1/2° trim - either by bow or stern

LBP/80 heave - period 8 seconds

All materials shall be free from imperfections of manufacture and from defects which adversely affect appearance or serviceability. All sharp edges or projections which constitute a personnel hazard shall be removed.

Where aluminum must be attached to dissimilar metals or between dissimilar alloys of aluminum, fasteners shall be of stainless steel of an approved design with insulation as required. Where other dissimilar materials are to be attached, the fastenings shall be as approved.

All pressure grease fittings shall be of monel where exposed to weather and zinc or cadmium coated steel elsewhere and be limited to one size and a maximum of two types. The fittings shall be made accessible either with elbow bodies or extensions and shall be of the threaded type suitable for use with high pressure grease guns.

All galvanizing shall be done by the hot dip process, and the zinc shall be not less than 98% pure. In instances where some types of materials cannot be hot dip galvanized, zinc silicate coating may then be substituted.

All bolt heads and nuts shall be of hexagonal Standard Type in accordance with international standards (American National Standards Institute). Where required by the Regulatory Bodies of Safety Codes they are to be of the Heavy Series.

Except as otherwise specified, stainless steel called for herein shall be AISI 403 or 316, finish No. 4 for interior applications. Weather applications shall be AISI 316.

Where zinc protectors are required they shall conform to specification MIL-A-18001.

Contractor shall furnish to Operator, for Operator's approval, which approval shall not be unreasonably withheld, the names of manufacturers, vendors and subcontractors for material or work the Contractor contemplates incorporating in or having performed on the Vessel.

1.8 VESSEL SAFETY, SECURITY AND PRESERVATION

Rigid control of welding and grounding shall be maintained for the protection of the hull, stern tube and other hull appendages. Stray electrical current protection shall be provided in accordance with NAVSHIPS Technical Manual, Chapter 9920, Section XIII, and to the satisfaction of the Operator's representative.

An approved impressed current cathodic protection system shall be provided for the hull immediately after arrival at Contractor's yard and until re-delivery of the ship. The potential of the hull shall be held in the range of -750 to -850 mV (silver-silver chloride cell) in order to provide protection against corrosion of the hull. The Contractor shall log the hull potentials daily for the first three (3) weeks after arrival of the ship and weekly thereafter. The Contractor shall verify that the cathodic protection used is compatible with the underwater paint system existing on the Vessel.

In fresh water locations, if the Contractor does not install an approved cathodic protection system, he will be required to maintain a minimum hull potential of -750 Mv and maximum -900 Mv, as measured by a silver-silver chloride reference electrode, during the conversion time which the ship is afloat. Readings shall be taken weekly, recorded and submitted to Operator's representatives.

While Vessel is at Contractor yard it shall be its responsibility to protect the entire Vessel and its equipment from damage of any source. This includes painting or smearing not specifically covered by these Specifications or approved by the Operator's representatives. The Contractor, at his expense, shall restore the structure, its equipment, systems and coatings to the condition the Vessel was in upon delivery to the Contractor's yard. Temporary floor coverings shall be provided in the Quarters passageways, Captain's Chief Engineer's S.R., Bridge and spaces that may have to remain open.

It shall be the Contractor's responsibility to protect the Vessel against fire, flooding, capsizing, pilferage and vandalism. Spare parts, tools or equipment missing or damaged shall be replaced or restored at Contractor's expense. Restoration shall be to Operator's representative's approval. Storerooms, lockers, and spaces containing loose items of equipment shall be locked or provisions made therefor. Staterooms, mess rooms, galley, Bridge, etc., shall also be kept under lock.

The Contractor shall take adequate precautions to prevent the accidental or unauthorized release of CO₂ in the Vessel's fire protection storage system.

While Vessel is in Contractor's custody all areas of the ship shall be maintained and kept in a clean and sanitary condition and openings closed against the weather. Equipment and piping shall be drained to prevent damage from freezing or corrosion.

It shall be the Contractor's responsibility to provide for a suitable and safe working environment regardless of the condition the Vessel is delivered to Contractor's yard.

The Contractor shall remove, as necessary, all hazardous liquids or substances to insure a safe working environment, including removal of fuels and combustible liquids and substances, etc.

The Operator shall endeavor to deliver Vessel with minimum amount of fuel in tanks, but the Contractor shall empty, gas free and clean fuel tanks in which hot work will be performed.

The Contractor shall provide for the protection and safety of its personnel and that of the Vessel's crew and Operator's representatives. Railings, warning signs, and alarms, if necessary, shall be provided by the Contractor in accordance with OSHA and other applicable requirements.

The Contractor shall undertake to maintain and preserve all equipment. In addition, the following specific program shall be carried out:

1. Boiler
 - a. Fit cover over inner stack
 - b. Install heat lamps in firesides
 - c. Pressurize and maintain waterside with nitrogen
2. Main Turbines and Gears
 - a. Install dehumidifier in main reduction gear casing
 - b. Operate lube oil system weekly
 - c. Jack turbine shafts and reduction gear weekly
 - d. Operate lube oil purifier weekly
 - e. Maintain lube oil temperature between 90° and 100° F
3. All Motors - Install heat lamps or energize heaters
4. All Controllers - Install moisture absorbing material and seal
5. Rotating Machines - Rotate weekly, each time leaving in a different position
6. Piping Systems - Drain all steam, condensate, water and air lines, including connected equipment
7. S.S. Turbine Generators
 - a. Circulate lube oil weekly
 - b. Energize generator heater or provide heat lamps
 - c. Hand jack weekly
8. Prior to testing, the Owner will light-off boiler and maintain plant to test the modified systems
9. Electrical Equipment unless needed for safeguarding the Vessel or the equipment itself, shall be de-energized through their disconnect switches or removal of the breaker

10. Sea Connections - Secured
11. Deck Machinery - Coat with preservative and rotate weekly
12. Ramp handling gear to be protected from the elements

A record of these procedures, logging each item as it is effected by the Contractor shall be maintained on a daily basis. A copy of the log shall be furnished the Operator's representative weekly.

Where required, Contractor's chemist shall approve any hot work in the Vessel.

1.9 SOURCE OF MATERIALS

All materials and equipment required by these Specifications shall be furnished by the Contractor, unless otherwise specified.

1.10 SERVICES

Contractor shall furnish, as may be required to maintain or operate the Vessel in a safe and satisfactory condition, all fuels, distilled and potable water, fire fighting elements, electrical power, crane service, housekeeping and guard services, ventilation, access facilities, etc.

1.11 VESSEL SURVEY

It is recommended that Vessel be surveyed by prospective Contractors against these Specifications, as well as against current regulatory body requirements for the converted vessel, before submitting his bid. Survey shall be at bidder's expense.

1.12 VESSEL RE-DELIVERY

The Contractor shall re-deliver the ship in accordance with the Contract, after a successful Acceptance Survey, ready to receive cargo, with all parts of the ship thoroughly cleaned of all dunnage and dirt, and with particular emphasis on the ready condition of all tanks and accommodations, to be immediately put to use without further preparation or cleaning.

The existence of any major uncorrected Contractor-responsibility deficiency item affecting the safe navigation or the immediate, efficient use of the ship for its intended service will be sufficient cause to reject re-delivery of the ship pending the correction of the item or items concerned and the delay in re-delivery resulting therefrom shall be a matter of Contractor responsibility. All major tests shall be

completed prior to re-delivery of the ship. The existence of a large number of uncorrected minor deficiencies remaining will be a cause for rejection of re-delivery until their number has been reduced to an Operator's acceptable level.

If at any time prior to formal acceptance of the ship there is warrantable reason for believing the underwater portion of the ship to have been seriously impaired, the Contractor shall place the ship in drydock and adequately repair, clean, and paint the damaged areas at his own expense. A protest or notice by the Operator, filed with the Classification Society and sustained by them, shall be deemed a "warrantable reason" for requesting drydocking. Inspection for damage may be by diver if mutually agreed upon.

To insure that the Vessel is in a proper condition for re-delivery, a final joint inspection of the Vessel (Acceptance Survey) shall be made by the Operator and the Contractor, at least three (3) days prior to the scheduled re-delivery date, along with a review of the status of completion of work deficiencies and items developed subsequent to the Acceptance Survey.

In connection with this Agreement, it must be recognized that under these Specifications, the Contractor is required to re-deliver a Vessel with the work free of all known defects and deficiencies directly associated with conversion of the Vessel and other work defined herein and/or damage caused by the Contractor. Resolution of delay in re-delivery of the Vessel shall be in accordance with the stipulations of the Contract.

Nothing in these Specifications shall infer that the Vessel shall be re-delivered not in Class, even if the item, or items, are not specifically covered in the Plans and Specifications.

At re-delivery Vessel shall be ready to sail with necessary equipment liquids such as lubrication oils, fuel oil, distilled water, potable water, etc., at levels (and soundings) as initially delivered by the Operator to the Contractor as approved by the Operator's representatives. Makeup of operating liquids deficiency shall be at Contractor's expense.

All materials, workmanship, equipment and systems shall be guaranteed by the Contractor to be free of defects for a period of one (1) year.

SECTION II - STRUCTURAL

2.0 GENERAL

All structural work shall be in accordance with approved drawings.

Materials shall be in accordance with ABS requirements as a minimum as shown on the Contract Guidance Plans, or in accordance with the following, whichever is the more exacting requirement.

(1) Plating:

- Up to 0.5" - ABS Gr. A
- 0.5" to 1.0" - ABS Gr. B
- 1.0" to 2.0" - ABS Gr. C
- Over 1.375" - ABS Gr. C - Normalized

(2) Stiffeners:

Steel angles, flat bars and channel up to 3/4" thick and all wide flange beams and I beams, any thickness shall be ASTM A-36.

Steel angles, flat bars and channels over 3/4" thick shall be ABS Gr. A unless required to be of high strength steel.

(3) Welding of all ASTM-A36 material over 3/4" thick shall be with low hydrogen electrodes.

ASTM-A36 steel over 1/2" thick shall comply with the following;

- (1) The steel is to be kilned or semi-kilned
- (2) Carbon content plus 1/6 of the manganese content shall not exceed 0.4%
- (3) Maximum carbon content of .23% and a manganese/carbon ratio of 2.5 is to be specified for built-up shapes (not rolled shapes).

In the Specific case of hull materials, if the Contract and Guidance Plans call for higher grade material in certain locations, the higher requirements of the Plans shall govern.

2.1 NEW MIDBODY

A 90'-9" midbody shall be pre-fabricated by the Contractor and shall be ready for insertion in the Vessel upon arrival at the Contractor's facilities.

The Vessel shall be drydocked and cut 12" forward of existing Frame 135. The decks, bulkheads and shell shall have been properly reinforced by the Contractor before cutting. Floating off or sliding off the cut parts and new midbody for the joining operation shall ascertain that no undue stresses develop locally or in the overall structure of the parts or the whole (after joining).

The new midbody's section and structure shall match the existing section and structure of the ship at the cut point. Offsets to be taken from existing Vessel. The lengthened ship shall conform to the Contract and Guidance Plans in every respect. Including designation of spaces, decks, frame spacing, frame designation and shall incorporate all features shown on the Plans not now provided. These features include, but are not limited to:

- (a) A new bulkhead at Frame 134/27 from Tank top to Second Deck
- (b) Four new bulkhead doors, as specified elsewhere
- (c) A.W.T. floor at Frame 134/27 to form a new D.B. tank

New joints at midbody to be stress relieved by local heating.

2.2 SPAR DECK

A new trailer Spar Deck, 190'-0" long, shall be pre-fabricated and installed on the Vessel above the existing Main Deck as shown on the Contract and Guidance Plans.

Contractor may elect to pre-fabricate a portion of this Spar Deck as a unit with the new midbody. The completed Spar Deck, after the joining of the midbody, shall have two (2) expansion joints, one at about its midlength and another in the form of slotted trunk at after end.

2.3 VEHICLE RAMP

A new ramp, as shown on the Plans, shall be pre-fabricated and installed for vehicle access to the Spar Deck. Expanded metal grating shall be welded on the ramp to provide for vehicle traction. Expanded metal shall be steel, 6.25# standard, Style No. 9 or heavier, AMETCO Mfg. Co., or equal. See also Section VI for Special Features for Alaska Service.

2.4 STRAPS

The strength of the lengthened Vessel shall be suitable for a SWBM of 500,000 FT x TONS, which will require the installation of steel doubler straps on the Main Deck and Bottom Shell, as shown on the Plans. Strap material in accordance with Paragraph 2.0 and the Plans.

Straps shall extend past the 0.4 midship length, forward and aft, and shall taper in thickness and width as shown on the Plans.

Straps shall be secured by slot welding; slots shall be 1" wide by 3" long on 12" centers. Slots shall be sandblasted after welding and filled with Red-Hand epoxy before painting.

2.5 SPAR DECK SUPPORT AND RACKING STRUCTURE

The new Spar Deck shall be supported by trunks and stanchions as shown on the Plans. The trunks shall extend down to the Third Deck and shall provide the main racking strength for the new structure. The separation provided at the Upper Deck by the expansion joints shall be as shown on plans furnished. The after two racking trunks are to have slotted joints as shown on plans furnished.

As shown on the Plans, for continuity with the structure above, new stanchions and reinforcing of existing ones with rider plates shall be provided below the Main Deck down to the Tank Top.

2.6 ADDITIONAL MODIFICATIONS TO STANCHIONS

The following additional stanchion and associated structure modifications, not directly related to the support of the new Upper Deck shall be carried out:

- (a) Stanchion at Fr. 138, centerline, Main Deck to tank top shall be removed. Corresponding deck transverses, web frames and longitudinal girder 19'-3" off to portside, shall be reinforced accordingly.
- (b) Stanchion at Fr. 99, starboard side (only) 19'-3" off centerline shall be removed between Main and Second Decks. Corresponding starboard side web frame and transverses under Main and Second Deck and centerline stanchion Main Deck to Tank Top shall be reinforced accordingly.

2.7 BILGE KEEL

Existing bilge keel forward of Fr. 135 shall be removed.

A bilge keel shall be provided on the new midbody, parallel to the centerline, starting at Fr. 134/1 and to line up with the retained after portion of the existing bilge keel.

New bilge keel construction shall be the same as the existing keel. Forward end of the bilge keel at Fr. 134/1 shall be soft ended and shall terminate at the corresponding floor.

2.8 STRUCTURAL CONTINUITY

Structural continuity of longitudinal members shall be provided between the forward and aft sections of the existing Vessel and the new midbody. Transition between existing and new members shall be gradual but in no case shall the scantling reductions take place where full member strength is required. If necessary, stiffening of longitudinal members in the existing portions of the Vessel shall be effected to carry out the gradual transition.

2.9 WORKMANSHIP

All workmanship shall be of a standard quality consistent with good shipbuilding practice to ensure that the requisite tightness is obtained, exposed surfaces are smooth, proper fit and alignment accomplished, and stress concentrations avoided.

All cutting, flanging, edge preparation and temperature control of high tensile and notch tough steels where and if provided shall be performed in accordance with the manufacturer's recommendation and guidance.

Special care shall be exercised in the alignment of the Upper Deck support and other structural members that are intercostal and non-continuous.

Lifting eyes, staging clips, dogs, etc., to be cut off and surface ground smooth for painting purposes.

2.10 TESTING AND INSPECTION OF WELDS

| |
|--|
| Industrial radiographic inspection or any other method satisfactory to the Regulatory Bodies is required for shell, main deck and cargo tanks. Should the Regulatory Bodies, due to unsatisfactory welding as a whole, deem it necessary to increase the percentage or area of internal examination, it shall be done at the Contractor's expense. |
|--|

2.11 WELDING

All welding in tanks, on outside exposed surfaces, interior hold spaces, in bilges, and in all other wet spaces, except fuel oil tanks, shall be continuous.

Decks, bulkheads, shell, etc., shall have surfaces reasonably, fair, without buckles, kinks, or other surface irregularities in accordance with acceptable standards and good shipbuilding practice.

2.12 MANHOLES

Manholes in new midbody shall be flush. Top of manhole cover shall be level with inner bottom plating. Manhole sizes shall be 15" x 23" minimum or as indicated on the Plans.

SECTION III - OUTFITTING

3.0 GENERAL - EQUIPMENT

Vessel's equipment numeral will change from the present U-37 to U-38 after lengthening, but anchors, anchor chains, windlass hawse pipes, hawsers and towlines shall be surveyed by Contractor to determine if they are still adequate. If any item of equipment, upon A.B.S. inspection, is found to be worn below allowable limits, its replacement shall be the subject of a separate negotiation.

3.1 RAILS

Railings shall be located as shown on Plans around the Upper Deck, vehicle ramp, and as required. They shall be 3 feet-6 inches above finished deck. Handrails shall have at least 2-1/2 inches hand clearance.

Railings, stanchions, and associating fittings in exterior and utility spaces shall be galvanized steel.

Railings on deck shall be three-course pipe, 1-1/4 inches on top course and 3/4 inch elsewhere, with pip or flat bar stanchions spaced 5 feet-0 inches and braced as required, except as otherwise required in 3.5.

3.2 DOORS, WATERTIGHT, HINGED

Three (3) new, side hinged, watertight, power operated doors shall be provided and fitted in the new midbody at Frame 134/27, Third Deck and Tank Top, as shown on the Plans. One (1) new, top hinged, watertight power door shall be provided and fitted at about Frame 200 at the foot of the ramp leading from the Second Deck to Hold No. 5. Door sizes and direction of swing- - see also General Arrangement Plan--shall be as follows:

| <u>No.</u> | <u>Location</u> | <u>Size</u> | <u>Swing/Hinge</u> |
|------------|---------------------------------|-------------------|--------------------|
| 1 | No. 2-A Hold | 16'6" W x 14'6" H | Fwd. Stbd/L.H. |
| 1 | No. 2-A Tween Stbd | 14'0" W x 15'6" H | Fwd. Outbd/R.H. |
| 1 | No. 2-A Tween Port | 14'0" W x 15'6" H | Fwd. Outbd/L.H. |
| 1 | No. 5 Hold *Price separately | 17'6" W x 15'6" H | Fwd. Upward/Top* |

Doors shall be similar to existing doors which were designed and fabricated by Avondale Shipyards, Inc.

Door actuating equipment-- for swinging and dogging-- consisting of electrically powered hydraulic systems, shall be located on the doors with the controls mounted on the bulkhead adjacent to their respective door. Hydraulic equipment shall

be identical to that on existing doors. The doors will be locally operated from one side of the bulkhead and shall swing clear of the opening.

Structural protection shall be provided on the doors in way of the hydraulic door opening cylinder to prevent damage to the cylinder. Cables from the control box to the door actuators shall be protected from damage by leading them through the bulkhead and through the door framework by using stuffing tubes as required.

Door frames, especially reinforced at the top, bottom and bottom corners shall be installed at all four locations.

Ventilation, fire protection and lighting, as specified elsewhere, shall be provided in the space created at the ramp to No. 5 'Tween Deck between W.T. doors. Price this separately.

3.3 BALLAST

Fixed ballast shall be installed in No. 2 Outbd Doublebottom P&S. Ballast shall consist of QCM aggregate pumped into the tanks in slurry form through Contractor pre-cut openings, as shown on the Guidance Plan. Vents shall be cut to assure that tanks are filled to the underside of the Tank Top plating. Openings and vent shall be closed up--as shown on the Plan--after water has decanted, pumped out and USCG, ABS and Operator representatives are satisfied that maximum possible ballast has been installed. Installed density of QCM ballast shall be 220 pounds per cubic foot. Total dry installed quantity shall be about 1800 long tons.

Permanent provisions shall be made for sounding and pumping out; see Section IV.

3.4 VEHICLE STOWAGES - LASHING FITTINGS

Vehicles, trailers and auto stowages shall be provided as shown on the Guidance Plan.

A deck engagement button--"roloc button"--shall be provided for the Roloc Box Stand of each trailer to be stowed and located as shown on the Guidance Stowage Plan. roloc buttons shall be provided also on all ramps, except ramp to Upper Deck, for 40 Foot trailers with provisions to accommodate 45 foot trailers at the ramp breaks, top and bottom. Extra roloc buttons shall also be provided on the Upper Deck to accommodate two (2) rows of 45 foot trailers.

A suitable quantity of D-rings shall be provided throughout the new midbody, Spar Deck and ramp to Spar Deck, for use with conventional vehicle lashing gear. The quantity of D-rings is based on six (6) lashing points per trailer and four (4) per auto.

Lashing gear is not part of this Specification or the ship's equipment provided by the Shipbuilder.

D-rings of 90,000 pound total capacity shall be located as follows:

All trailers parking slots to have a pair of D-rings placed abreast of the roloc button and four (4) at the opposite end. Doubling up on D-rings by adjacent trailers is acceptable.

D-rings of 15,000 lb. capacity shall be used for lashing autos in all auto stowage spaces shown on the Stowage Plan except for the Third Deck which shall have cloverleaf cutouts through the deck. Four D-rings (or cloverleaf deck cutouts, in the case of the Third Deck) will be provided for each auto slot, a pair at each end.

Roloc Box Stands and lashings shall not be provided as part of the ship's modification.

Stowage racks, sufficient to stow the added complement of trailer lashings, shall be installed between web frames in the new midbody. The racks are to consist of galvanized 1/4" x 2" steel flat bars support about 5-1/2' above the deck.

3.5 VEHICLE CURBING AND PIPE PROTECTION

Curbing, fabricated from 6" Sch 80 pipe with 4" legs, shall be installed inboard of the hand rail on all sides of the Upper Deck for the full length of the vehicle stowage areas on that deck including access ramp. Heavy railing, of 6 inch double extra heavy piping shall be placed across the aft end of the Spar Deck such that the rear of the Trailers will come up against the heavy railing before hitting the house front. The 6 inch uprights shall be bracketed with same size piping. Curbing will also be installed on the new midbody's Main Deck as necessary to prevent parking of vehicles in such a way as to obstruct personnel access lanes and areas.

Where items of equipment, electrical distribution boxes lighting fixtures, safety gear, ship structure or fittings require protection from possible vehicle damage protective stanchions or sections of curbing shall be installed. Curbing shall be so constructed as not to damage vehicle tires. Survey of TOTE's sister ships will provide opportunity to note locations and type of protecting structure required.

3.6 MANHOLES AND VERTICAL LADDERS

Two access/escape manholes with vertical ladders are to be installed between Second, Third and Tank Top Decks in way of new midbody. These accesses must be suitable to accommodate a large man and need to be fitted with quick acting, hand wheel operated, watertight covers at Second Deck level. The Third Deck access to be fitted with a lightweight hinged cover with open holdback arrangement.

SECTION IV - SURFACE PREPARATION & COATINGS

? All structural steel used for the conversion of the Vessel shall be shot-blasted and coated in accordance with a separate set of Operator's Specifications, which will also include (special markings) for trailer stowage slots, trailer identification, traffic patterns, warning signs, etc.

SECTION V - PIPING AND EQUIPMENT

5.0 PIPING SYSTEMS - GENERAL

The Contractor shall furnish and install piping, valves, fittings and appurtenances necessary to extend all existing hull piping systems through the new midbody and to provide the hull services required by the new compartments within the midbody, as well as in other spaces affected by the conversion.

Valves, piping, fittings and related accessories shall conform to the material and standards required by the regulatory bodies and agencies listed in Section I and shall, in no case, be of a lesser quality than on existing systems aboard the Vessel. The Contractor shall design and install new piping systems and make re-connections such as to assure reliable operation with minimum maintenance.

Piping in the new midbody, under the Upper Deck and under its access ramp shall be installed to provide for maximum headroom and to preclude it being damaged by trailer traffic. Piping, valves, fittings, sprinkling heads, etc., shall not extend outside of the structural framing and if unavoidable, substantial structural protection shall be provided to the approval of the Operator's representatives.

As appropriate, take-down joints shall be provided in piping systems and equipment to facilitate maintenance. Piping penetrations through structural members shall be compensated as required.

All piping, piping appurtenances and applicable equipment shall be thoroughly cleaned after fabrication and prior to shipboard installation. After complete shipboard installation each system shall be thoroughly cleaned and flushed of all foreign matter with the applicable system's medium, or an approved substitute.

Systems, associated components and/or equipment piping and appurtenances, shall be readily identifiable as to service, direction of flow, medium, etc.

Name plates shall be securely attached to all valves. Identification methods shall comply with the requirements of the Regulatory Bodies, and shall consist of one, or a combination of the following:

Label Plates: Brass and/or metal photo process.

Stenciling and/or Color Coding: Banding or solid

Expansion loops or offsets shall be provided in the piping systems to allow for thermal effects and ship's deflection due to cargo loading conditions or seaway effects.

5.1 DECK DRAINS

Two short spud scuppers with strainer, discharging directly overboard shall be provided in midbody's Main Deck, each side.

New Spar Deck shall be drained, P&S, using pipes which shall terminate at the Main Deck level. A coaming shall be installed around the edge of the Upper Deck to contain rainwater.

5.2 CARBON DIOXIDE FIRE EXTINGUISHING

The existing carbon dioxide fire extinguishing system shall be extended and re-connected through the new midbody. Discharge nozzles of the flush fit type, as furnished by C-O Two Sales and Services, Inc., of Hoboken, New Jersey, shall be installed in the new midbody, under the Second Deck and in new No. 5 Hold bounded by the ramp from Second to Third Deck aft and W.T. Doors at both ends of the ramp. Size and spacings of nozzles shall be in accordance with USCG requirements. No additional CO₂ bottles are required.

5.3 HEATING COILS FOR D.B. TANKS

Existing steam supply and condensate return to/from heating coils for fuel oil tanks in double bottom shall be re-connected through the new midbody except that the coils in D.B. No. 2, P&S, Inboard shall be cut off 12" forward of bulkhead at Frame 128; bulkhead penetration removed and spigot patched. Steam supply and condensate return shall be re-used for D.B. No. 2A, P&S Inboard tanks. Removal of unused heating coils in No. 2 tanks is not intended.

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|---|
| Heating coil surface shall be provided in D.B. No. 2A, P&S, Inboard tanks at the rate of one (1) square foot per 40 cu.ft. of tank volume. Additional surface, approximately 10 sq.ft., shall be provided around each F.O. suction strum. |
|---|

Valve label plates in existing manifolds in space above stabilizing duct shall be replaced with proper designation labels.

5.4 F.O. FILLING AND TRANSFER

Existing F.O. Filling and transfer system shall be extended through the new midbody to re-connect to existing D.B. No. 1, P&S, F.O. tank. Suction into D.B. No. 3, P&S Outboard, shall be relocated forward into new midbody, just aft of bulkhead Fr. 134/27. See Guidance Plan, Dwg. No. 180-200-101.

Provisions shall be made in the Engine Room to connect from Bilge & Ballast Systems's swing ell for D.B. No. 2A, P&S, Inboard tanks, to F.O. Transfer Pump's suction and discharge mains. See Guidance Plan.

5.5 TANK LEVEL INDICATING SYSTEM

Existing pneumatic type tank level indicating system shall be extended through the new midbody to re-connect forward tanks served by the system, except that the lines serving D.B. No. 2, P&S, Outboard tanks shall be re-dedicated to serve D.B. No. 2A, P&S, Outboard tanks. New gages and service lines shall be provided for D.B. No. 2A, P&S, Inboard tanks. Gage board in Engine Room shall be re-labelled to suit and scale re-calibrated as necessary.

Contractor may, if economical, provide a better state of the art system if approved by Owners.

5.6 COMPRESSED AIR

Existing compressed air system shall be extended through new midbody and re-connected to services in the forward spaces. Additional outlets shall be provided in the new spaces as follows:

Main and Second Decks, one each at about Fr. 134/28, Stbd.

Third Deck and Hold, one each at about Fr. 134/30, Stbd. near centerline.

5.7 RAMP DE-ICING

Existing de-icing system shall be extended through the new midbody. A new de-icing heater shall be added; refer to article 7.7 for more specific details.

5.8 VENTS, SOUNDINGS AND OVERFLOWS

Double bottom tanks in new midbody shall be provided with vents and soundings.

Vents for D.B. No. 2 tanks, P&S, Outboard shall be retained. Sounding tubes in these tanks shall be protected to keep the QCM ballast from obstructing the tubes and remain effective as a sounding.

In accordance with regulatory bodies requirements on pollution abatement, containment provisions shall be made at each F.O. tank vent outlet. Contractor shall bring to the Operator's attention if containment provisions are missing for the existing F.O. tanks vents and F.O. settling tank overflow.

Soundings shall be provided to bilge drain wells in new Holds Nos. 2A and No. 4.

5.9 S.W. COOLING TO CARGO ELEVATOR

S.W. cooling supply and return to heat exchanger for cargo elevator hydraulic power pack shall be extended and re-connected. See also article 6.22, Section VI.

5.10 INSTRUMENTATION

Where not specifically covered elsewhere, the Contractor shall furnish necessary instrumentation such as pressure and vacuum gages, thermometers, indicators, etc. that may be required for the proper operation of the new and modified systems. Instrumentation that is removed to facilitate the work, to protect the items, or to relocate it shall be re-installed in satisfactory condition. Surplus instrumentation shall remain the property of the Operator and shall be turned over to its representative.

All instrumentation shall be properly calibrated just prior to re-delivery of the Vessel.

5.11 SPRINKLING SYSTEM

Existing sprinkling system shall be extended into and through the new midbody and the system re-zoned to a great extent. Nine (9) instead of eight (8) zones will be required under the Main Deck and four (4) new zones shall be installed under the Upper Deck. Zone coverage shall be nearly even and in accordance with USCG requirements so that each sprinkler head projects a minimum spray of 12 gal/min per 100 square feet of deck area with a maximum of 81 sprinkling heads per zone. See Guidance Plan.

Sprinkling system zonal distribution mains shall be modified from the Fire Control Room on the Main Deck to each zone. Manifolds in Fire Control Room shall be re-labelled to suit.

5.12 BILGE AND BALLAST SYSTEM

Bilge and ballast system shall be extended through the midbody and re-connected to system serving forward spaces. Connections to and suctions from D.B. No. 2, P&S, Inboard and Outboard tanks shall be retained; suction shall be protected so that QCM ballast does not obstruct suction from the tanks.

New ballast suctions and suction mains shall be provided for D.B. No. 2A, P&S, Outboard and Inboard tanks. Manifold in E.R. shall be extended accordingly.

Provide new bilge drain-wells in No. 2A Hold, P&S, and one(1) bilge drain-well in No. 4 Hold and connect same to

bilge system. Bilge suction to No. 2A Hold (only) shall be sized in accordance with USCG regulations.

Furnish and install a new bilge and ballast pump of the following characteristics:

Warren Type 5VMG with automatic grease lubricators
Capacity 1000 GPM
Total Head 70 feet
Motor driven 25 Hp, 1750 RPM - 440 V/3 Phase/60 Hz non-overloading
Casing - Bronze, Alloy 907
Impeller - QQ-N-281 Class A, hot rolled
Shaft Sleeves - QQ-N-286 Class A, hot finished, age hardened
Casing wearing rings - ASTM B144 Alloy 937
Impeller wearing rings - ASTM B584 Alloy 905

Note: All bilge and ballast piping for tanks and drain wells Fwd of No. 3 Double Bottoms will be re-routed out of Double Bottoms and run at side shell above Tank Top at time of conversion.

5.13 FIRE SYSTEM

Fire system shall be extended through the midbody and re-connected to existing system forward. New fire stations shall be provided as follows:

Five (5) on the Spar Deck, evenly distributed

Two (2) on the Main Deck at about Fr. 134/27 (P&S)

Two (2) on the Second Deck at about Fr. 134 (P&S)

Because of the proximity of the parked trailers, fire stations on the Spar Deck shall be provided with detachable doors. Doors shall be permanently lashed to box to avoid their accidental loss.

New fire stations shall conform to current USCG regulations and shall be of the combination solid stream/water spray type with fifty foot hoses.

Contractor shall furnish and install a new, two speed fire and general service pump and a new, single speed fire pump. Pumps shall have the following characteristics:

| | <u>Fire/Gen'l Service</u> | <u>Fire</u> |
|----------------------|--|-------------|
| Type | Vertical, Centrifugal | Same |
| Capacity, GPM | 1000/670 | 670 |
| Speeds | 2 | 1 |
| Head, Psi | 30/125 | 125 |
| Motor, HP & RPM | Vendor furnish, non-overloading pump characteristics. | |
| Materials | Same as for B & B pump in 4.13 above | |
| Manufacturer & Model | Warren 4DBHV with automatic grease lubricators, or equal | |

Contractor shall clearly point out in his Bid of any deviations from the requirements in 4.13 and 4.14. ?

5.14 CARGO HOLD VENTILATION

Supply and exhaust ventilation shall be provided the new cargo spaces similar to system for existing holds.

Supply to No. 2A Hold shall be ducted from two (2) intake plenums, one at each side, to terminals in the lower hold such that air throw is projected down to the tank top plating and is uniformly distributed throughout the hold. Ducting shall be sized for medium velocity air supply and thickness shall meet ABS requirements for coaming. Exhaust from the lower hold shall be through cloverleaf cut-outs on the Third Deck. Additional exhaust openings shall be cut on the Third Deck as necessary to provide for uniformly unrestricted upward flow. Exhaust from the 'Tween Deck shall be through openings in the Second Deck near the shell and leading to an exhaust plenum which shall discharge inboard into the open Second Deck space.

Intake plenums shall be of the air lift type, baffled to preclude the entry of seawater into the cargo spaces. Intake plenums shall be provided with drain holes to the outside and the intake opening shall be screened and louvered. Water separation volume of the intake plenums shall be at least 350 cubic feet.

Height of exhaust plenum opening into the Second Deck area shall be located in accordance with ABS requirements considering that the Second Deck is the Bulkhead/Freeboard deck. Opening shall be screened.

Fire dampers shall be provided in the supply and exhaust system in accordance with USCG requirements. Existing ventilation failure/shut-down alarm system shall be extended to cover the new installation.

Supply and exhaust ventilation to the new Hold No. 4 shall be provided with due consideration to the location of the intake and exhaust terminals. Penetration of the Second Deck outboard of the ramp opening, if contemplated, shall be specifically reviewed with and approved by the ABS.

A ventilation opening about 36" wide and 72" high shall be cut in bulkhead 169, Portside, outboard of the ramp door to provide natural cross ventilation in the area. No ventilation openings are to be provided at the Second Deck level in the new midbody.

New hold ventilation fans and plenums shall be accessible for removal, servicing, and adjustment without dismounting or removal of other equipment, or burning of access opening.

The Contractor shall furnish and install the following hold ventilation fans:

| | <u>No. 2A Hold</u> | <u>No. 4 Hold</u> |
|----------------|--------------------|-------------------|
| Quantity | 2 | 1 |
| Type | Axial Flow | Axial Flow |
| M.A. Size | 400 AF | 100 AF |
| Capacity, CFM | 33,600 | 10,000 |
| Speeds | 2 | 1 |
| Motor size, HP | 20/5 | 5 |

The Contractor shall carefully note that the Upper Deck supporting structure, which extends down to the Third Deck as specified in Section II, coincides with some of the existing intake and exhaust plenums outside the new midbody. Integration of the plenums shall be in accordance with the Contract and Guidance Plans. Contractor shall also note that Exhaust ventilation from holds Nos. 2A and 3 is directed inboard. Shell openings for No. 3 Hold shall be plated over, spigot fashion, with same thickness plate as existing.

5.15 TESTS

? Piping systems and equipment tests shall be carried out as required by the regulatory bodies, as specified in Paragraphs 1.4 and 1.9 and in accordance with the following:

All shop tests and ship installation tests shall be scheduled and completed to the satisfaction of the Operator and shall be in accordance with the Society of Naval Architects and Marine Engineers Technical and Research Bulletin No. 3-8, Code of Installation and Shop Tests, (latest issue).

5.16 SHAFT ALIGNMENT

Upon arrival of the Vessel at Contractor's yard propulsion shaft alignment condition shall be verified. Verification shall be by taking gap/sag readings and weighing the shafting establishing bearing reactions. Shaft alignment shall be monitored during cutting the Vessel and through the midbody joining operation. Upon completion of the joining and after all structural work has been done shaft alignment shall be verified by the Operator.

Alignment of HP and LP couplings to high speed pinions shall be verified after completion of all structural work. Any work that may be required to return coupling alignment to acceptable values shall be at Contractor's expense.

SECTION VI - ELECTRICAL

6.0 GENERAL

The electrical system shall be installed to satisfy the requirements, rules, and regulations as outlined in Section I.

Equipment shall be accessible for removal, servicing and adjustment without dismounting or removal of other equipment.

All bolts, screws, nuts and washers unless otherwise specified shall be corrosion resistant.

6.1 EQUIPMENT AND MATERIAL

All power consuming equipment shall operate satisfactorily with a voltage variation of plus or minus 5 percent and A-C equipment with a frequency variation of plus or minus 3 percent or shall be supplied via special regulating equipment. Temporary voltage dips during motor starting or speed changing shall not cause damage to interruption of service to equipment.

Equipment exposed to the weather shall be water-tight unless located in watertight cabs. Dripproof protection shall be provided for other equipment whether individually enclosed, or assembled on open panel structures. Weathertight equipment shall be installed in the Second Deck area.

Explosion-proof and intrinsically safe equipment shall be used where required by Regulatory Bodies.

Ferrous components of equipment subject to corrosion, except motor enclosures, distribution and control cabinets, and similar enclosures shall, unless otherwise specified, have a corrosion resistant finish such as zinc or cadmium plate, applied before any painting, but after fabrication work is completed. In general, painting is acceptable as a corrosion resistant finish for distribution cabinets, motors, controllers and similar enclosures.

In general, electrical equipment requiring external wiring shall be provided with suitable terminal boards or blocks equipped with solderless lugs to which the Contractor may make all necessary connections, except that approved twist-on, pressure-type connectors shall be used in lieu of terminal blocks and lugs for making connections in lighting outlets and connection boxes.

All new electrical equipment, the function and application of which is not immediately self-evident shall be supplied with nameplates immediately adjacent to the equipment.

Any special precaution, maintenance or operating instructions shall be included on the nameplates or on a separate plate attached elsewhere on the equipment.

Instruments shall be marked with name of circuit application, either directly on the instrument or on a separately mounted nameplate. When the entire panel or a panel nameplate so indicates, circuit designations for individual instruments may be omitted.

6.2 CABLE INSTALLATION

A. General

Cables shall be run as directly as practicable, consistent with adequate ventilation of the cable wireways and with due care in the avoidance of hazardous or otherwise locations.

Cables shall not be installed adjacent to piping or other apparatus which may cause leaks or condensation drips. When such proximity is unavoidable, suitable shielding shall be provided.

Cables for weather deck mounted fixtures shall be installed on the inside surface of house Structures supporting such fixtures.

Cables shall not be installed on gratings or walkways in engine room, in bilges, or in spaces exposed to oil damage.

Where necessary to run cables under gratings or walkways they shall be installed on the underside of dripproof galvanized metal pans.

B. Wireways and Supports

All cable hanger material shall be of steel not less than 2.4 mm (3/32 inch) thick with corrosion resistant finish. Painting will be acceptable as a corrosion resistant finish for all interior hanger material except in refrigerated spaces and gallery. Bolts, nuts and washers for use with painted hanger material shall be sherardized or cadmium plated. Hanger material for refrigerated spaces and galleys shall be of stainless steel with stainless steel, brass or bronze nuts, bolts and washers. Each weld area at hanger or stud shall be wire brushed or sandblasted, where required, and coated immediately after welding and before the installation of any cables.

C. Penetrations

Openings in decks or platforms for the purpose of cable penetrations which do not require stuffing tubes or kickpipe protection shall have a lining continuously welded all around the edge of the opening. The lining shall consist of steel collar extending not less than 75 mm (2 inches) above the platform. This requirement particularly applies to cable openings in deck structure where watertight integrity is not otherwise required.

Cable penetrations through bulkheads and decks, both watertight and non-watertight shall comply with regulatory body requirements. Extra heavy low alloy kickpipes with stuffing tubes or equivalents shall be welded into all open decks. All kickpipes shall be 230 mm (9 inches) high to top of stuffing tube. Built-up watertight boxes may be used in lieu of kickpipes.

The metal bars of wireway guards shall be of 50 mm (2 inch) by 6.4 mm (1/4 inch) steel and sling guards made of flat bars or expanded metal shall be provided where necessary.

6.3 MOTORS AND CONTROLLERS

To the extent possible, new motors to be interchangeable with Owners existing Vessels.

Motors and controllers shall be provided for the following:

- (a) Fire pump
- (b) Fire and General Service Pump
- (c) Bilge and ballast pump
- (d) Cargo hold ventilation fans

All motors shall be of the same manufacturer, in so far as practicable and shall be of commercial marine quality.

All motors over 1/4 hp shall be A-C squirrel cage induction type designed for 460 volts 3 phase, 60 Hz continuous duty, with Class B or F insulation, unless otherwise specified.

Particular care should be exercised in the selection of A-C motors to insure that each motor is not too large for the service intended, and thus avoid the low power factor inherent in underloaded induction motors.

In general, all motors shall be at least dripproof protected.

Each waterproof motor shall be provided with an automatic drain and breather fitting.

All motors 1/4 hp and over shall be equipped with antifriction bearings of suitable design to meet the imposed thrust and radial loads and to provide an adjusted fatigue life (L10) of 50,000 hours, except fan motors which should have an adjusted fatigued life (L10) of 1000.000 hours. Where motors are used with solid couplings, a bearing to take thrust shall be fixed to the shaft and housing, and the shaft end play limited to the clearance in the bearing. Use of tandem ball bearings for axial thrust loads is not acceptable.

All motors equipped with anti-friction bearings using pressure grease fittings shall have positive means, either by relief plugs or fittings or a clearance differential relief system, to prevent grease from being forced out upon the motor windings.

Axial flow fan motors shall be equipped with factory sealed prelubricated ball bearings or factory-sealed prelubricated ball bearing housings.

Round frame motors shall be provided for axial flow and propeller fans.

Motor overload protection shall normally be provided by the controller overload relay, but alternative built-in motor thermal protection also may be used if considered necessary for the intended service.

All controllers shall be of the same manufacturer, in so far as possible and shall be of commercial marine quality.

Generally, all integral rated motor controllers shall be across-the-line magnetic type, with master switches mounted at the controller door and with provision for control by protective thermal sensors where provided on the motor.

A complete wiring diagram of each controller shall be attached, with heat resistant transparent protective covering, to the inside surface of the control cabinet door.

Each controller shall be provided with the necessary circuits and auxiliary contacts for energizing indicating lights, alarms and illuminated pushbuttons.

Motor control circuits extended to the Engine Room Centralized Console or to any control console may be supplied from a common low voltage A-C or D-C power supply provided at such console for monitoring and control functions.

Motor control circuits except for hold ventilation fans shall be so arranged that normal or "at-will" stoppage of a motor will not activate the stopped alarm on the engine room

control console, but any stoppage resulting from loss of voltage, overload or operation of safety protective devices, or interlocks associated with engine room control, etc., shall actuate the stopped alarm.

If practicable, new controllers shall be installed where existing controllers are located. Existing cable shall be re-used if within regulatory bodies' capacity for the new motors.

Heaters shall be installed within all motor and controller enclosures subject to accumulation of condensation and wide variation of temperature.

6.4 LIGHTING

Lighting fixtures of the fluorescent type, similar to existing fixtures shall be installed in the new midbody spaces, under the Upper Deck and over the Main Deck forward of the Upper Deck.

Lighting fixtures under all new decks shall be placed directly above aisles between trailer rows to assure illumination of the deck area with minimum shading. See Paragraph 4.3 and Stowage Guidance Plan.

Illumination levels for new spaces shall be as follows:

- (a) Ten (10) foot candles in new cargo holds 'Tween Decks and Main Deck under the Deck.
- (b) Five (5) foot candles on Main Deck Forward.

6.5 NEW EQUIPMENT CONTROL STATIONS

New equipment in E.R. (pumps) shall be controlled from the controller, by local PB and, if applicable, the Centralized Control Console.

New cargo hold ventilation fans shall be controlled from the Bridge and running/stop lights and stopped alarm--intentional or unintentional as required by USCG--included in E.R. cabinet.

New power operated watertight doors in cargo holds shall be indicated and controlled in the Fire Control Room. Local operation of doors shall also be provided.

6.6 NAVIGATIONAL AND SIGNAL LIGHTS

? → See requirements following item (g) on page 4.

6.7 NAVIGATIONAL AND COMMUNICATION SYSTEMS

? → See requirements following item (q) on page 4, Section I.

SECTION VII - SPECIAL FEATURES FOR ALASKA SERVICE

7.0 GENERAL

This Section describes features modifying or adding to existing features aboard the SS "NORTHERN LIGHTS", Sun Hull 670. It shall be the Contractor's responsibility to familiarize himself with many existing features which are to be expanded so that there is duplication and compatibility with the added material and equipment.

7.1 SHORE RAMP HANDLING

7. || The following is only a summary description of features related to the ramp handling system. In this particular instance, it is important that the Contractor try to obtain existing design and working drawings as noted in 1.2, Section I.

One (1) fully equipped shore ramp handling trailer access landing shall be provided on the Main Deck, port side only.

- one midships (forward of racking trunk at Fr. 134/25)

Side railing shall be modified to provide the access. Portable railing shall be provided to close the side access openings when shore ramps are not in place.

One "built up" davit shall be fabricated and installed midships, extending from the Main Deck to the Spar Deck, port side, between Frames 134/16 and 134/17. Detachable outriggers, bolted to the "built up" davit, and a support pad off the racking structure supporting the Upper Deck at Frame 134/25 shall be provided midships. Main Deck and racking trunk shall be suitably reinforced in way of the ramp handling gear's load bearing areas.

Four (4) new winches shall be Owner furnished and installed on the Second Deck for handling the midship shore ramp. Installation shall be complete, including foundation, rollers, fairleads, snatch blocks, power supply, controls, wire rope, etc.

7.2 STOWAGE ARRANGEMENTS

Due to the new traffic patterns resulting from trailer access to the Main Deck in Anchorage, many Roloc Buttons, D-rings, etc. will require relocation or new ones added. Underdeck button reinforcement shall be provided accordingly. Relocated and new roloc buttons will be shown on the Stowage Plan. This item will be handled as separate item at time of modification.

7.3 PANAMA CANAL FITTINGS

Temporary chocks, bitts, cleats, etc. shall be provided by the successful bidder for a single transit through the Panama Canal as may be required by the regulations.

7.4 FIREMAIN

The firemain shall be modified to make it suitable for the low ambient temperatures in the Alaska trade and to serve as a de-icing system.

Firemain exposed to freezing temperatures shall be provided with adequate drains and arranged to be manually drained to minimize the possibility of freeze-ups. The basic anti-freezing protection on the Second, Main and Platform Decks, is provided by the existing cut out valve in the boiler casing at the Second Deck level and drained. Insulation will not be required. An emergency suction connection to the Fire Pump shall be provided from the main circulating system low sea chest.

Portions of the firemain system shall be capable of use for de-icing. Below designated firemain stations shall be fitted to enable use with 1-1/2" de-icing hoses, Contractor supplied. De-icing shall be possible from fire stations Nos. 14, 22 and 40; and from fire stations within the superstructure. To prevent introduction of water into the ambient exposed portions of the firemain system during de-icing operations, fire stations Nos. 14, 22 and 40 shall be supplied by separate piping from the main riser in the boiler casing. A separate valve shall be provided to enable these stations to be cut out and drained when not in use.

In the event of fire, pressure shall be provided to all fire stations through the two valves located in the boiler casing. A suitable warning sign shall be provided in the Fire Control Room to alert the crew to open the valves and close them, as necessary.

A salt water heater, with approximate capacity of 500 GPM to raise the temperature to 180°F shall be provided and installed in the Engine Room extension into the starboard side void. Hot salt water from the heater shall circulate to the firemain, the main low suction sea chest and the salt water service pump's suction strainer. The cut off valve for the hot salt water system that serves the sea chest shall be located adjacent to the Fire, B&B and General Service Pump.

Heater shall be supplied from the contaminated steam system.

7.5 RAMP DE-ICING SYSTEM

Existing ramp de-icing system shall be expanded by the installation of one additional de-icing heater supplied from the contaminated steam system. The additional heater shall form a separate system and distribution made as listed herein.

New de-icing unit shall use ethylene glycol as the de-icing fluid; its capacity shall be equal to the existing unit and shall be installed in the former void space, starboard side. De-icing circulating pump shall be provided having the following characteristics:

| | |
|------------------------|-------------|
| Capacity | 635 GPM |
| Total head | 125 PSI |
| Fluid: Ethylene Glycol | 40% in F.W. |
| Sp. Grav. @ 170°F | 1.02 |
| Motor rating | 7.5 HP |
| Speed | 3500 RPM |

- 7.5.1 Additional panel coils, similar to existing panels, shall be added under the Main Deck between the foot of the Upper Deck ramp and the forwardmost shore ramp davits, portside (about 30 panels).
- 7.5.2 Additional panel coils shall be added under the Main Deck between the midship shore ramp landing and the forward and aft leading to the Second Deck (about 24 panels).
- 7.5.3 Additional panels shall be located across the knuckles at both the foot and head of Main Deck to Second Deck aft ramp (total of about 12 panels).
- 7.5.4 Additional panels shall be installed under the Main Deck to Upper Deck ramp, extending about 15 feet under the Upper Deck (about 30 panels).

7.5.5 De-icing systems allocation/distribution

System I - To be served by existing de-icing system:

1. Main Deck ramp forward (existing panels).
2. Main Deck ramp aft (existing panels).
3. 6 added panels at head of Main Deck ramp aft.
4. 6 added panels at foot of Main Deck ramp aft.
5. 12 out of the 24 added panels under Main Deck leading to the aft ramp, at midship vehicle access lanes (aft part of 7.7.2 above).

System II - To be served by new de-icing installation.

1. Ramp to Spar Deck, complete.
2. 30 added panels under Main Deck at forward vehicle access lanes, portside (6.16.1 above).
3. 12 out of the 24 added panels under the Main Deck and leading to the forward ramp at the midship access lanes (forward portion of 6.16.2).

7.6 ELECTRICAL MODIFICATIONS

Electric strip heaters shall be provided for all the cargo hold vent fan motors and bearings.

7.7 MOORING SYSTEM MODIFICATIONS

The existing mooring arrangement shall be modified and extended to make it suitable for Portside mooring in Anchorage, Alaska. Starboard side mooring shall be retained as is, unless specifically required herein.

Three (3) new Owner furnished C.T. winches with controllers shall be installed as shown on the General Arrangement Plan and shall be located on the Main Deck, Port side, at about Frs. 38, 132 and 173.

Winches will be Kocks, Elhydy type 1300, with a maximum line pull of 28,000 lbs at 55 ft/min. Winch setting shall be for 20,000 lbs pull.

Foundations, power supply, etc., shall be provided as required.

Universal chocks, fairleads, rollers, bolsters, closed and open chocks and bitts shall be provided as required. Contractor shall consider the following specific fittings as part of the requirements: three (3) new Universal Fairleads (type Dunstos No. 4S), and relocation of three (3) 18" roller type Fairleads with under deck stiffening.

SECTION VIII - PLANS AND INSTRUCTION BOOKS

8.1 WORKING PLANS

A nearly full set of working drawings for conversion will be furnished by TOTE together with Master Plan Schedule. Any additional working drawings or sketches required will be provided by the Contractor. Those drawings not supplied will be so marked on the Master Plan list.

The successful bidder will receive sepias of plans supplied and will submit all applicable drawings to regulatory bodies for approval on an "extension of approval" basis for the S.S. "NORTHERN LIGHTS", Sun Hull 670.

Working plans shall be of sufficient scale and detail to indicate proper relationship of all parts and working access to all spaces as necessary for convenient operation and maintenance. Key dimensions shall be shown in U.S customary units.

Plans showing the structure and arrangements of the Vessel, its equipment and various systems shall be submitted to the Operator in duplicate and a reproducible copy shall be sent to the Operator's representative. Any deviations from the Plans or Specification which shall form part of the Contract shall be brought to the Operator's attention in writing at the time of submittal. One copy, marked with the Operator's action, shall be returned to the Contractor.

Any work performed prior to approval of plans shall be at the Contractor's risk. Approval of the Contractor's Plans shall not relieve him of the responsibility for satisfactory design and workmanship within the intent of the Specifications.

Structural plans shall indicate clearly the condition of design, i.e., design head and test head for bulkheads and decks, weight of equipment for foundations, working loads and test loads.

8.2 FINISHED PLANS

Prior to re-delivery of the Vessel, the Contractor shall furnish to the Operator stamped "as built", five (5) complete sets of all working plans and vendors' plans corrected to show the Vessel as built and including all equipment and outfit as well as instruction manuals and information drawings and suitable indices thereof. Plans shall be on medium weight paper, blue or black lines on white background. Two (2) of these shall be placed aboard the Vessel.

In addition to the above, one (1) set of Mylar reproducibles of the below listed Key Plans shall be furnished. Two (2) sets of blue line prints shall be placed aboard ship. Plans shall not exceed 34" width.

- (a) General Arrangement of Decks and Inboard Profile
- (b) Midship section
- (c) Structural Profile
- (d) Capacity Plan (Indicating dimension of highest point of Vessel above baseline)
- (e) Tank Sounding Tables
- (f) Docking Plan
- (g) Bilge and Ballast Piping Diagrams
- (h) Electrical Power and Lighting Diagrams
- (i) Trim and Stability Booklet (Indicating Longitudinal strength calculations)
- (j) Lines Plan
- (k) Hydrostatic Curves

All plans furnished shall be folded accordion fashion, 9 x 14", with the title block showing.

In addition, one (10 set of finished plans, (a)-(g) inclusive, listed below, shall be suitably printed and framed and installed aboard the Vessel in locations, designated by the Owner's representative:

- (a) General Arrangement of Decks and Inboard Profile
- (b) Docking Plan (embodying Transverse docking sections, shell outlets and other openings, and a summary of painting areas)
- (c) Fuel Oil Piping System Diagrams
- (d) Capacity Plan with deadweight, displacement, tons per inch scales and Freeboard markings
- (e) Fire Fighting Systems Diagrams showing all safety equipment
- (f) Maneuvering Data Diagrams required by USCG Rules 197.19-1

8.3 PLAN LIST

The plan numbering system shall be Sun ships standard. Owners will assist with numbering system.

The Contractor shall furnish the Operator, prior to commencement of construction, a complete list of all plans for the Vessel. The Plan List including Vendor's plans shall be revised periodically as necessary during the course of the contract so as to accurately reflect the plans actually prepared and/or scheduled and key event dates, at the completion of the contract, a corrected Plan List, showing the drawings actually made and issued shall be prepared and delivered to the Operator.

8.4 BOOKLETS AND DATA

Prior to delivery of the Vessel, the Contractor shall furnish the Operator a total of six (6) copies, black print on white background, of the following booklets and compilations of data; one copy of each shall be placed aboard the ship. Booklets and data shall be in the English language and U.S. customary units.

- (a) Capacity Tables or cargo, ballast, fuel oil, diesel oil and fresh water tanks
- (b) Certificate of Deadweight Determination
- (c) Trim and Stability Data
- (d) Booklet of Final Piping Diagrams and Piping lists showing the arrangements and describing briefly the operation of all Piping Systems as finally installed in the Vessel
- (e) Allowance List, which shall be updated for new and modified equipment

8.5 SPECIFICATION

The Contractor shall update the Contract Specification concurrently with processing of agreed changes.

8.6 EQUIPMENT LISTS

Prior to delivery of the Vessel, the Contractor shall furnish the Operator with a total of four (4) copies of the following equipment lists:

- (a) The service capacities and characteristics, the manufacturers' and Vendors' names, and the serial numbers of the equipment, and appurtenances installed aboard the Vessel as a result of the modifications.

- (b) Spare parts and outfit items furnished by the Contractor to the Vessel against formal receipts by the Operator's representative.

Two (2) sets of each shall be placed aboard the Vessel.

8.7 INSTRUCTION BOOKS

Prior to delivery of the Vessel, the Contractor shall furnish the Operator a total of five (5) copies of instruction books in the English language for operation and maintenance of all equipment and appurtenances installed in the Vessel by the Contractor.

Two (2) sets shall be for Vessel use and shall be placed aboard ship and three (3) sets shall be delivered to Operator's office.

8.8 OWNERSHIP OF DESIGN

The Contractor shall transfer to the Operator ownership of the design and all features incorporated in the conversion of the Vessel. The Operator shall have the right to duplicate the design in any way and use any and all data, information, features, etc.

SECTION IX - GAS FREEING OF FUEL OIL TANKS AND ASSOCIATED
PIPE LINES - NO. 3 DOUBLEBOTTOMS

9.1 GAS FREEING

NOTE: Owners will arrange to offload remaining fuel from fuel oil tanks after delivery of Vessel to Contractor's facility.

Contractor to provide necessary labor, material, equipment and disposals to gas free and make safe for men and fire No. 3 Doublebottom fuel tanks together with associated supply, vent and sounding piping prior to start of any hot work.

Tanks involved are:

No. 3 INBD Port & Starboard Cap = 403 tons each

S/S PUERTO RICO
CONVERSION PAINTING SPECIFICATIONS

GENERAL

All new structural steel used for the conversion of the Vessel shall be shot-blasted to a commercial finish and coated with Hempels' 2S-1572 .5 mil DFT of inorganic zinc preconstruction primer immediately after blasting.

All disturbed areas of the ship required to be re-coated as a result of the conversion and not otherwise covered herein shall be cleaned as necessary to remove rust, scale, dirt and other extraneous matter prior to the application of any coating. Welds, bare steel and other disturbed areas on steel which is to be coated with inorganic zinc and organic zinc shall be cleaned by blasting prior to application of the inorganic zinc and organic zinc coating to SSPC-SP-10 blast.

All weld slag, weld splatter to be ground off prior to sand-blasting and weld under cuts and weld pinholes to be filled with weld. Areas where dogs have been removed to be ground smoother and deep gouges to be welded and ground smooth. Prior to abrasive blast cleaning of steel, remove oil, grease, weld smoke and other contamination with a suitable detergent followed by high pressure fresh water hosing - 1000 to 2900 PSI.

All edges, rat holes, behind angle stiffeners, welds and difficult areas to coat will be stripe coated prior to the full coat application.

Non weathered zinc silicate coatings are porous and popping may occur in the subsequent coat. The best way to avoid popping is to apply a mist coat in the first pass of the topcoat. Let the air escape and apply the rest of the top coat.

The new midbody, Upper Deck structure and existing portions of the Vessel shall be coated in accordance with the following. Coating thicknesses are minimum dry film thickness (mils).

Priming and coating of field welds of compartments or tanks required to be air tested shall not be done until after completion of such testing.

Unless otherwise specifically required, all paints and paint materials shall conform to the latest issues of indicated specifications.

All surface preparation, coating procedures including intervals between coats, weather condition, temperature, humidity, etc. shall be in accordance with manufacturer's recommendations, and subject to Operator's representative's approval.

All fixtures, deck coverings, electrical equipment, label plates, name plates, gages, thermometers, etc. shall be protected during coating operations, and upon completion of the work all paint or smudges shall be removed.

Except for the minimum surface preparation requirements specified herein, all applications shall be in accordance with the manufacturer's instructions and supervision.

Unless otherwise specified, or approved, by the manufacturer, paint and other coating materials shall not be thinned or altered in any manner by the Contractor. Surfaces shall be free of moisture before the application of coating materials.

Machinery or other equipment which is received from vendors who have not completed the coating requirements, shall be thoroughly cleaned and finish coated by the Contractor.

Safe staging and adequate lighting shall be provided for inspection of surfaces and coating work.

Standard safety colors shall be used to distinguish fixtures and fittings which present a hazard. Trailer and auto stowage slots shall be painted as defined herein and in the Guidance Plan.

Special areas of the Vessel, new and existing, disturbed areas shall be prepared and coated as follows: With Hempels Coatings or equal. Any coating other than Hempel will be subject to Owner's approval.

PAINTING SPECIFICATIONS

ITEM 1 MACHINERY, FOUNDATIONS, BITTS, CHOCKS AND HANDRAILS

1 coat 2 mil DFT Hempadur 1536-zinc rich epoxy
1 coat 4 mil DFT Hempadur 1530 epoxy primer
1 coat 4 mil DFT Hempadur 4520-1148 gray

ITEM 2 MAIN DECK AND SECOND DECK FROM DECK EDGE TO 15'-0" INBOARD P/S

1 coat 3 mil DFT Hempadur 1536-zinc rich epoxy
1 coat 4 mil DFT Hempadur 1530 epoxy primer
1 coat 8 mil DFT Hempadur 4520 epoxy non-skid

ITEM 3 MAIN DECK AND SECOND DECK FROM 15'-0" INBOARD OF DECK EDGE TO CENTERLINE AND THIRD DECK, TANK TOP, SPAR DECK AND SPAR DECK RAMP

1 coat 3 mil DFT Hempadur 1536-zinc rich epoxy
1 coat 10 mil DFT Hempadur 4520 epoxy non-skid

ITEM 4 MAIN AND SECOND DECK OVERHEADS, SIDE SHELL, RACKING STRUCTURE AND STANCHIONS

1 stripe coat 2 mil DFT 1536-zinc rich epoxy
1 full coat 2 mil DFT 1536-zinc rich epoxy
1 full coat 4 mil DFT 1530 epoxy primer
1 full coat 3 mil DFT 558U epoxy enamel

ITEM 5 THIRD DECK, TANK TOP, SIDESHELL AND STRUCTURES

1 spot coat 2 mil DFT Hemucryl 1803 primer
1 spot coat 2 mil DFT Hemucryl 1803 primer
1 full coat 1.5 mil DFT Hemucryl 5803 enamel

ITEM 6 VENT AND RACKING TRUNK INTERIORS

1 full coat 2 mil DFT 1536-zinc rich epoxy
1 full coat 8 mil 4520 epoxy

ITEM 7 DEEP LOAD LINE TO DECK EDGE - EXTERIOR SIDE SHELL, RACKING STRUCTURE, OVERHAND WITH BRACKETS AND FASHION PLATE

1 full coat 2 mil DFT 1536-zinc rich epoxy
2 full coats 3 mil DFT Hempatex 4633 primer
1 full coat 2 mil DFT Hempatex 5636 - TOTE blue

ITEM 8 KEEL TO ROLLING KEEL

2 full coats 6 mil DFT Hempadur 4563 epoxy
2 full coats 5 mil DFT Hempels 7660 antifouling

ITEM 9 ROLLING KEEL TO DEEP LOAD LINE

2 full coats 10 mil DFT Hempadur 3553 epoxy
2 full coats 5 mil DFT Hempel 7660 antifouling

ITEM 10 DOUBLEBOTTOM TANKS - ALL SURFACES

1 stripe coat 2 mil DFT Hempel Galvosil 1570
1 full coat 3-4 mil DFT Hempel Galvosil 1570


NOTE: The Zinc silicate Galvosil 1570 will be kept in constant agitation during the spray application. The DFT is 3-4 mils. If the 3-4 mil DFT is not achieved on the initial coat, the Contractor has 48 hr. max. @ 70° F & 60% RH to re-coat and bring the DFT to standard and 24 hour at 68° F & 75% RH. Otherwise it will be necessary to re-sweep prior to overcoating.



PRIVILEGED AND CONFIDENTIAL

MEMORANDUM

TO: Don Nugent
George Riddle
Ed Eckelhoff

FROM: Bill Zavín 

DATE: September 13, 1991

SUBJECT: Re-Draft of Sub Contractors Scope of Work:
Gunderson, Inc. New Construction

Please review the attached revised scope of work as discussed at our meeting with Gunderson. Please let me know at your earliest convenience whether or not these revision are correct and appropriate.

cc: Bill Johnston
Bruce Gair

SCOPE OF WORK FOR SUBCONTRACTOR

Crowley Maritime Corporation
711' x 105' 8" x 56' 42,000 DWT
Double Hull Twin Screw Geared Diesel Tank Ship

References

1. Draft specification for Crowley Maritime Corporation (CMC) self-propelled double hulled tank vessel dated August 15, 1991.
2. Appendix "A" 42,000 DWT tanker preliminary equipment specifications.
3. Contract guidance drawings Table 1 - 5 on Page 1 - 11 of Reference #1 above.

General

The following description is intended to outline in general terms the preliminary scope of work that Gunderson would subcontract to others when constructing two 42,000 DWT tankers described in the above referenced documents, at Gunderson's facility in Portland, Oregon.

Subcontractor would provide labor, welding machines, scaffolding, tools and other like items to do the pre-launch work. Gunderson would provide electrical power, compressed air, crane service and like support services.

All work done by the subcontractor will be expected to comply with all applicable sections of the specifications and drawings governing materials, workmanship, quality, testing, dock trials, sea trials, certification, documentation, warranties, regulatory body and owner approvals, procedures, schedules, "as-built" drawings, etc.

Post launch work would be done alongside a suitable wharf having the necessary support services and crane capacities at the Port of Portland shipyard.

It is not intended that the vessel be dry-docked after launching before delivery to the owner.

Subcontractor will supply sufficient personnel to meet the requirements of sea trials for work done by the subcontractor.

The owner will operate the ship during sea trials and Gunderson will supply support items as required by the specifications.

Scope of Work for Subcontractor

Crowley Maritime Corporation
711' x 105' 8" x 56' 42,000 DWT
Double Hull Twin Screw Geared Diesel Tank Ship

Scope of Work

1. Deck House

The entire deck house aft of bulkhead #65, including the interior bulkheads between the trunk deck and the main deck, will be fabricated, assembled, outfitted, furnished, painted, and completed as a unit, or several units, by the subcontractor at his facility. Subcontractor will provide specific items of equipment as listed in Reference #2, and all other materials necessary to provide a completely outfitted deck house.

The subcontractor will be responsible for lifting and placing the deck house unit(s) and completing the installation on board the hull alongside the wharf.

2. Trunk Deck to Main Deck Aft of Bulkhead #64

Subcontractor will fabricate and erect all steel work in this area including ladders, hand rails and equipment foundations. Subcontractor will provide all materials and labor to finish outfit this area, including those items listed in Reference #2. Gunderson will land machinery components on their foundations for completion by subcontractor. All doors, port lights and windows will be provided and installed by subcontractor. The interior of this space will be finish-painted by subcontractor. Gunderson will paint the exterior as part of the hull.

3. Cofferdam Bulkhead #64 to Bulkhead #65

This space will be built as part of the hull by Gunderson, which will also fabricate and install the pump wells and below deck ballast and cargo piping. Subcontractor will assemble and install owner furnished cargo and ballast pumps and motors. Painting will be done by Gunderson.

4. Lifeboats and Davits

Subcontractor will purchase lifeboats, davits, rigging and all other materials needed for subcontractor to completely install and test.

Scope of Work for Subcontractor

Crowley Maritime Corporation
711' x 105' 8" x 56' 42,000 DWT
Double Hull Twin Screw Geared Diesel Tank Ship

5. Stores Cranes and Cargo Cranes

Four cranes will be provided by the owner. Gunderson will install these cranes on foundation provided by Gunderson and subcontractor will provide all labor and materials to make the cranes operational.

6. Machinery Spaces Bulkhead #65 to Stern

Gunderson will complete all structural steel work and foundations in these spaces. The owner and subcontractor will provide all machinery items in this area listed in Reference #2, and Gunderson will land them in their respective positions on their foundations, by crane or other means.

The subcontractor will be responsible for providing all other items of equipment, materials, ladders, walkways, gratings and components to complete the engine room and control room below the main deck and trunk deck level. Gunderson will prime paint these areas for finish painting by subcontractor.

7. Propulsion Train

Gunderson and the owner will provide the main engines and gears with accessories as listed in Reference #2. The stern tubes and propeller bearing "V" struts will be provided and installed in the hull by Gunderson. The subcontractor will purchase and install the stern tube oil seals, bearings, lube oil system, line shaft, tail shaft, hydraulic shaft coupling, line shaft bearing, gear box to shaft coupling and propeller Pilgrim nut. The propeller, fairwater and rope guard will be provided by Gunderson. Subcontractor will do all boring, machining, drilling, etc., to install all components of the propulsion train from the main engine to the propeller fairing, except the stern tube.

Subcontractor will assist Gunderson as needed to obtain the alignment analysis, vibration analysis and critical speed analysis required by the specification.

Subcontractor will be responsible for chocking, securing and aligning all components of the propulsion train after the vessel is launched.

Scope of Work for Subcontractor

Crowley Maritime Corporation
711' x 105' 8" x 56' 42,000 DWT
Double Hull Twin Screw Geared Diesel Tank Ship

8. Rudders and Steering Gear

Gunderson will fabricate and install in the hull the rudder horn and rudder stock housing. Subcontractor will purchase all materials for the rudder, rudder stock, pintle, all bearings, carrier and nuts, and provide all machining to bore the housings and assemble and install the complete rudders in the hull.

Gunderson will provide the steering gear set on its foundation for completion of installation to the rudders, including all wiring and piping, by the subcontractor.

9. Electrical Systems

Subcontractor will provide all materials and labor to complete all electrical systems throughout the ship, including the switchboards, motor controllers, transformers, contact breakers, etc.

The only electrical items not furnished by the subcontractor will be motors and other components furnished as part of a piece of equipment such as pumps, fans, bow thruster, etc. Diesel generator sets will be provided by the owner

It is intended to include the Sections 87 through 99 of Reference #1 as being subcontractor's responsibility to provide, install and complete.

10. Piping Systems

Gunderson will provide and install cargo and ballast piping systems forward of Bulkhead #64 below the main and truck decks. Subcontractor will be responsible for providing all materials and labor to fabricate, install, test and operate all piping systems elsewhere on the ship, including mooring winches and anchor winch hydraulic systems. Subcontractor will also test and prove operational the ballast and cargo systems. Gunderson will be responsible for any defects in its portion of these systems.

Scope of Work for Subcontractor

Crowley Maritime Corporation
711' x 105' 8" x 56' 42,000 DWT
Double Hull Twin Screw Geared Diesel Tank Ship

11. Painting

Subcontractor will be responsible for painting the entire superstructure inside and outside, the main deck from bow to stern, the interior between main deck and trunk deck aft of Bulkhead #65 and the interior of the main machinery space and control room. In addition, subcontractor will be responsible for finish painting the following tanks on the interior, as required by the specification - wing ballast, L.O., F.O., F.W., steering flat and stowage flat, all aft of Bulkhead #65. Gunderson will do the prime painting.

12. Accommodation Ladder

Two ladders will be purchased, installed and tested by subcontractor.

13. Tank Testing

Gunderson will air test hull tanks to ABS requirements before launch. Subcontractor will hydro-test hull tanks to meet the requirements of ABS using the combined air/water testing criteria.

14. Mooring and Anchor Winches

Gunderson will provide and install foundations and install the mooring and anchor winches. Subcontractor will complete the installation as needed to make the winches operational.

Gunderson will install the anchor and chain. Subcontractor will reeve mooring lines onto winches after launch.

15. Owner Furnished Equipment

Equipment to be provided by the owner is listed on Page 104-1 of Reference #1.

SCOPE OF WORK FOR SUBCONTRACTOR

Crowley Maritime Corporation
711' x 105' 8" x 56' 42,000 DWT
Double Hull Twin Screw Geared Diesel Tank Ship

References

1. Draft specification for Crowley Maritime Corporation (CMC) self-propelled double hulled tank vessel dated August 15, 1991.
2. Appendix "A" 42,000 DWT tanker preliminary equipment specifications.
3. Contract guidance drawings Table 1 - 5 on Page 1 - 11 of Reference #1 above.

General

The following description is intended to outline in general terms the preliminary scope of work that Gunderson would subcontract to others when constructing two 42,000 DWT tankers described in the above referenced documents, at Gunderson's facility in Portland, Oregon.

Subcontractor would provide labor, welding machines, scaffolding, tools and other like items to do the pre-launch work. Gunderson would provide electrical power, compressed air, crane service and like support services.

All work done by the subcontractor will be expected to comply with all applicable sections of the specifications and drawings governing materials, workmanship, quality, testing, dock trials, sea trials, certification, documentation, warranties, regulatory body and owner approvals, procedures, schedules, "as-built" drawings, etc.

Post launch work would be done alongside a suitable wharf having the necessary support services and crane capacities at the Port of Portland shipyard.

It is not intended that the vessel be dry-docked after launching before delivery to the owner.

Subcontractor will supply sufficient personnel to meet the requirements of sea trials for work done by the subcontractor.

The owner will operate the ship during sea trials and Gunderson will supply support items as required by the specifications.

Scope of Work for Subcontractor

Crowley Maritime Corporation
711' x 105' 8" x 56' 42,000 DWT
Double Hull Twin Screw Geared Diesel Tank Ship

Scope of Work

1. Deck House

The entire deck house aft of bulkhead #65, including the interior bulkheads between the trunk deck and the main deck, will be fabricated, assembled, outfitted, furnished, painted, and completed as a unit, or several units, by the subcontractor at his facility. Subcontractor will provide specific items of equipment as listed in Reference #2, and all other materials necessary to provide a completely outfitted deck house.

The subcontractor will be responsible for lifting and placing the deck house unit(s) and completing the installation on board the hull alongside the wharf.

2. Trunk Deck to Main Deck Aft of Bulkhead #64

Subcontractor will fabricate and erect all steel work in this area including ladders, hand rails and equipment foundations. Subcontractor will provide all materials and labor to finish outfit this area, including those items listed in Reference #2. Gunderson will land machinery components on their foundations for completion by subcontractor. All doors, port lights and windows will be provided and installed by subcontractor. The interior of this space will be finish-painted by subcontractor. Gunderson will paint the exterior as part of the hull.

3. Cofferdam Bulkhead #64 to Bulkhead #65

This space will be built as part of the hull by Gunderson, which will also fabricate and install the pump wells and below deck ballast and cargo piping. Subcontractor will assemble and install owner furnished cargo and ballast pumps and motors. Painting will be done by Gunderson.

4. Lifeboats and Davits

Subcontractor will purchase lifeboats, davits, rigging and all other materials needed for subcontractor to completely install and test.

Scope of Work for Subcontractor

Crowley Maritime Corporation
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Double Hull Twin Screw Geared Diesel Tank Ship

5. Stores Cranes and Cargo Cranes

Four cranes will be provided by the owner. Gunderson will install these cranes on foundation provided by Gunderson and subcontractor will provide all labor and materials to make the cranes operational.

6. Machinery Spaces Bulkhead #65 to Stern

Gunderson will complete all structural steel work and foundations in these spaces. The owner and subcontractor will provide all machinery items in this area listed in Reference #2, and Gunderson will land them in their respective positions on their foundations, by crane or other means.

The subcontractor will be responsible for providing all other items of equipment, materials, ladders, walkways, gratings and components to complete the engine room and control room below the main deck and trunk deck level. Gunderson will prime paint these areas for finish painting by subcontractor.

7. Propulsion Train

Gunderson and the owner will provide the main engines and gears with accessories as listed in Reference #2. The stern tubes and propeller bearing "V" struts will be provided and installed in the hull by Gunderson. The subcontractor will purchase and install the stern tube oil seals, bearings, lube oil system, line shaft, tail shaft, hydraulic shaft coupling, line shaft bearing, gear box to shaft coupling and propeller Pilgrim nut. The propeller, fairwater and rope guard will be provided by Gunderson. Subcontractor will do all boring, machining, drilling, etc., to install all components of the propulsion train from the main engine to the propeller fairing, except the stern tube.

Subcontractor will assist Gunderson as needed to obtain the alignment analysis, vibration analysis and critical speed analysis required by the specification.

Subcontractor will be responsible for chocking, securing and aligning all components of the propulsion train after the vessel is launched.

Scope of Work for Subcontractor

Crowley Maritime Corporation
711' x 105' 8" x 56' 42,000 DWT
Double Hull Twin Screw Geared Diesel Tank Ship

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Gunderson will install the anchor and chain. Subcontractor will reeve mooring lines onto winches after launch.

15. Owner Furnished Equipment

Equipment to be provided by the owner is listed on Page 104-1 of Reference #1.



August 5, 1991

Mr. Richard Whiteside, Manager
Marine Technical & Special Projects
BP Oil Company
200 Public Square 22-2556-F
Cleveland, Ohio 44114-2375

Dear Dick:

Attached to this letter is a brief introduction to Gunderson, Inc. My own relationship with Gunderson dates back to 1947 when they fabricated the hull for the Sternwheeler PORTLAND. The Steamer PORTLAND, the first big steel job Gunderson did for Northwest Marine, was christened at its launching by my Mother. This began our history of projects together. Since that occasion, our companies have continued to work closely together: Sharing information; technology; skills and expertise.

Generally the nature of the working relationship has been that Gunderson commenced the work by building the seagoing vessel's hull. After the hull was launched at the Gunderson ways, Northwest Marine completed the project by providing installation, outfitting and finishing services in our facility. We have utilized this relationship successfully on both Government and Commercial new-building projects.

We nearly became a major subcontractor to them during their FMC Marine and Rail days for installation and outfitting of five Chevron GT vessels. Our Contract Departments could not find mutually acceptable terms for that venture. With ownership now in the hands of the Greenbrier principals, in lieu of FMC, a similar impasse would not present itself. We anticipate the relationship between our company and Gunderson will be a joint venture. The other possible structure would have Gunderson become the prime contractor to your company. We would work as a subcontractor to them.

Our joint venture team members plan to utilize the same naval architecture/marine engineering firm. We have enjoyed good work histories with both the Rosenblatt and Cushing firms. We enjoy good working relationships with other firms as well. The firm we would ultimately select would be subject to your approval.

We recognize the validity of your concern over the Port of Portland's willingness to make available Drydock No. 4 for this project. I would expect you to require a fully validated written confirmation from no less than the Executive Director of the Port of Portland for this set of reservations. I am certain of the joint venture's ability to secure these reservations for this series of dockings.

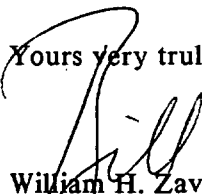
BP Oil Company
August 5, 1991
Page 2

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For this type of project, the combination of technical expertise and production capacity created by this joint venture has no equal in the United States. Our geographical advantages and unique cost effective profile should be proposed to you. We believe once we have been able to review and respond to your solicitation, our proposal will stand the full test of your scrutiny. Accordingly, I respectfully request that you include us when you distribute your solicitation packages.

If any questions arise, please feel free to call me at any time. I believe our team's participation in this project could be very advantageous to BP Oil.

Yours very truly,



William H. Zavín, II
Senior Vice President
Commercial Contracting Activities



August 5, 1991

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SOUTHWEST MARINE DIVISIONS: SAN DIEGO • SAN PEDRO • SAN FRANCISCO • SAMOA • NORTHWEST MARINE, PORTLAND, OREGON

CORPORATE HEADQUARTERS

Foot of Sampson Street • P.O. Box 13308 • San Diego • California • 92113-0308 • (619) 238-1000 • TWX 910-225-1167 SWM:SDG • FAX: (619) 238-0934

NWMAR131192



August 5, 1991

Mr. Richard Whiteside
Marine Technical & Special Projects
BP Oil Company
200 Public Square 22-2556-F
Cleveland, Ohio 44114-2375

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NWMAR131193



August 5, 1991

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Marine Technical & Special Projects
BP Oil Company
200 Public Square 22-2556-F
Cleveland, Ohio 44114-2375

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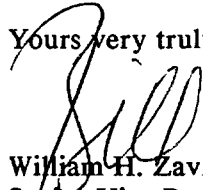
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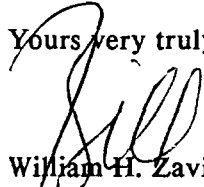
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GUNDERSON **INC.**

Gunderson Inc.

4350 Northwest Front Avenue
Portland Oregon 97210
503 228 9281

August 5, 1991

Mr. Richard Whiteside
Manager, Marine Technical & Special Projects
BP Oil Company
200 Public Square 22-2556-F
Cleveland, OH 44114-2375

Mr. Whiteside:

This letter and the accompanying materials are intended to give you a brief look at the credentials of Gunderson Inc. We have been acquainted by Southwest Marine/Northwest Marine personnel with your pending project for mid body replacement on four of your large tankers. The purpose of this letter is to urge you to include us on the list of potential offerors who are asked to develop a proposal for your work. We are confident our company has the requisite technical, financial and production capacity for this project. We are positioned to provide you with a responsible, competitive and well considered proposal for this undertaking.

Our company, originally founded in 1919 as Gunderson Brothers Engineering Corporation, has a strong history in commercial maritime vessel construction. The enclosed brochure speaks to our physical capacity for the building of steel vessels. The list of projects following this letter outlines our specific project history in areas that relate directly to the type of work we contemplate this project will require.

Our company began its days as a major general purpose steel plate fabricator. For more than four decades it thrived as a privately held fabricator of marine vessels to commercial operators in the United States. In 1965, the company was sold to FMC Corporation, which continued the company's growth and expansion into major ship construction. This activity under FMC reached its zenith in the late 1970's with the construction and outfitting of five double hulled gas turbine/electric drive oil tankers for Chevron Shipping.

In the mid 1980's, FMC Corporation of Chicago changed the focus of their company. Their new emphasis did not include the marine fabrication facility in Portland. The Marine and Rail Division was sold to a Portland investment group, The Greenbrier Companies.

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August 5, 1991

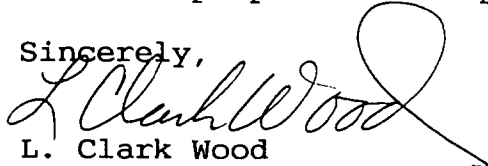
This group acquired the facility and personnel and re-established the company's identity under the name Gunderson Inc. The market perspective of the principals was considerably different from that of FMC. They chose to mold Gunderson into an extremely cost effective provider to specific industries in selected growth markets. The company chose to redeploy its resources into specific market segments where its innovative and highly competitive posture could provide the greatest benefit to both customer and provider.

Our company sees your mid body replacement concept to be one of those specific market opportunities where we can bring our considerable resources to bear. We see that this could be of considerable advantage to both your company and our own. During the domestic maritime market decline of the last five years, we have avoided competing for work in commodity type markets where our strengths are of no particular value to the ultimate user. We have, however, utilized and enhanced our skill level and competitive profile in other markets. We see this project and your concept as an opportunity to utilize our considerable advantages very effectively in an important growing market.

We have invested heavily in state-of-the-art steel fabrication equipment and software. Our computer numerically controlled (CNC) fabricating equipment has combined well with our CNC lofting program to reduce unit production costs. Our effectively scheduled production facility is staffed with a highly trained well supervised merit shop labor force. Our quality control and inspection groups are well trained and work closely with the welding technology development groups at the Oregon Graduate Center. We are a major customer and neighbor of Oregon Steel Mills, which also has a bountiful history as a supplier of ABS steel plate to the marine industry.

We stand prepared to respond to any questions you might have.

Sincerely,



L. Clark Wood
President

sln/2
Enclosures

Gunderson Inc.

Marine capabilities summary

Marine yard description

- 75 acres
- 750,000 square feet under cover
- 750' X 110 foot side-launch ways (largest on West Coast U.S.)
- Covered blast and paint facility
- 1100' outfitting dock with 30' water depth and two 45 ton whirley cranes

Engineering/Lofting

- In-house engineering department
- CNC Lofting

Crane Service

- 200 ton capacity Clyde whirley crane with 25-ton whip
 - 185' maximum boom reach
 - 50' high at deck
 - 200 tons capacity at 60' minimum reach
- 20 overhead cranes in plant ranging from 15 to 40 ton capacity
- Marine panel line cranes are 40 ton capacity

Plate Fabricating

- 50-foot long, 2000-ton CNC press brake
- Plate rollers - 22' X 1 1/8" plate thickness capacity (largest in Northwest)
- Plate shears, press brakes, NC punches and presses
- State of the art wire-feed welding, ABS/Coast Guard approved welding procedures
- Complete weld tech and training department

Burning capacity

- Five major burning machines
 - 2 CM-100 CNC burning tables with plasma torches
 - 1 CM-100 NC burning table

A sampling of Gunderson's marine projects

The primary marine work at the Gunderson marine yard since the early 1970's was building ocean-going barges. From 1973-1977, the company built five state of the art double-hull, gas turbine-electric drive oil tankers for Chevron Shipping Company, San Francisco. After those tank ships, 38 barges, all ocean-going, and most exceeding 400 feet in length were built. They include four of the world's largest triple-deck Ro-Ro barges, 580' X 105', several 105' X 400' deck cargo and tank barges, 4 - 250' dump scows, and a 420' crane barge equipped with a 500-ton whirley crane and helipad.

Below is partial list of marine jobs:

| Year | Vessel | Quantity | Description | Customer |
|---------|--------------|----------|---|-----------------------------------|
| 1962 | Drydock | 1 | Floating drydock, 25,000 ton capacity 661 X 140 ft. X 60 ft. | Port of Portland Drydock #3 |
| 1968-73 | Barges | 2 | Barge, 360ft. & 430 long, Oil barges/est | Crowley Maritime |
| 1970 | Barges | 2 | Deck barge, 400ft. X 99.5ft. | Crowley Maritime |
| 1973-77 | Tank ships | 5 | 650' X 105' X 50' double hull tankers, gas turbine/electric drive, 40,000 DWT | Chevron Shipping Company |
| 1977 | Scows, Dump | 4 | Dump Scow, 258 ft. X, 45 ft. | Smith-Rice |
| 1978 | Ro-Ro Barges | 4 | Triple Deck Trailer Barge: 580 ft. X 105 ft. X 57 ft. | Crowley Maritime |
| 1980 | Barges | 5 | Deck Cargo tank barge, 400ft. X 99.5ft. X 25ft.. | Crowley Maritime |
| 1982 | Barge | 1 | Crane Barge, 420 ft. X 98 ft. Equipped with 500 ton whirley crane and helipad | Morrison Knudsen, Boise, Idaho |
| 1982 | Barges | 4 | High capacity deck cargo barge 400ft. X105ft. X 20ft. | Crowley Maritime |

FEASIBILITY STUDY

on

**Business Activities for Building and
Rebuilding U.S. Vessels
Over The
Next Eight Years**

BUILD AND REBUILDING OPPORTUNITIES

I. JONES ACT VESSELS

The Merchant Marine Act, 1920 prohibits merchandise from being transported between U.S. ports "in any other vessel, than a vessel built in and documented under the laws of the United States and owned by persons who are citizens of the United States." Additionally vessels which have later been rebuilt may not be allowed to engage in coast wide trade "unless the entire rebuilding, including the construction of any major components of the hull or superstructure of the vessel is effected within the United States, its Territories, or its possessions." Although the Act was amended previously, in 1956 Congress for the first time prohibited domestic ships from being "rebuilt" abroad. Based on another issue Congress in 1960 added language to the Second Provision to address a loop hole that had been used to allow a vessel and body to be "rebuilt" abroad and inserted by a U.S. shipyard and yet the vessel remained documented. In a 1989 court case a District Court judge noted "significant inconsistencies are evident in the other Coast Guard rulings," on whether a "rebuilt" is allowable or not. Today, NASSCO's building of a containership for Matson, contains a Japanese manufactured main diesel engine.

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- A. Tankers: Alaskan crude carriers, product carriers, and chemical carriers
- B. Sea Going Barges
- C. Container and RO/RO Vessels
- D. Ferries
- E. Other Vessels

TANKERS

Oil Pollution Act of 1990

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These newly legislated double bottom requirements will result in the mandated retirement of 40 to 50 tankers over the next eight years. This forced retirement plan will take millions of deadweight tons from the current tanker fleet. However, replacement depends upon future demand for domestic tanker capacity.

According to Coast Guard records, there are approximately over 300 tankers in U.S. registry, including crude carriers, product tankers, gas and chemical carriers and specialty vessels. Of these approximately 38 are currently in lay-up. Nearly 50 percent are 20 years or older.

ALASKAN CRUDE CARRIERS U.S. - Jones Act Vessels

Unless ANWR is opened up to drilling, the amount of crude from the pipeline will decline over the next few years. The Oil Pollution Act of 1990 (OPA 90) should cause approximately 30 percent of the currently available tanker capacity to move that crude to be retired before 1995 and 1998. The decline in transportation of crude should happen faster than the retirement of tankers.

We know that BP has been looking to modify its four crude carriers in the trade if it makes economical sense. Under OPA 90, these vessels do not need to be retired until 2010 since they were built in 1977 and 1978. The first BP plan was to downsize its large crude carriers to 125,000 DWT (ie: our mid section removal of KEYSTONE CANYON) to allow their use in the Puget Sound area, and to shorten them for flexibility in Southern California ports. BP's current concept is to replace the mid-body cargo tank section. This could then be double-bottomed, shorter, get rid of the maintenance problems of the current cargo tanks, and meet OPA 90. According to our Marketing group, this cargo tank replacement to pencil out would have to be less expensive than what has been presented to BP so far by other U.S. shipyards.

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U. S. Flag - Jones Act Vessels

There are over 900 seagoing barges currently certified by the U.S. Coast Guard for use in ocean service. Approximately 50 percent are liquid barges for moving petroleum or chemicals. New York, Seattle, Tampa, Philadelphia, and San Francisco are among the major operational locations. Of the 900, 640 barges exceed 3,000 DWT. Approximately 45 percent of the existing larger seagoing barges are over 21 years of age. Vessels built in the 1960's and 1970's are reaching the end of their economic life.

Seagoing barge construction fell to almost non-existent levels in the mid-1980's. Surveys show the early stages of a rebound underway. This is partially the result of equipment aging and excess inventory being worked off. Zidell, for example, recently delivered two grain barges and a deck barge - and has two woodchip barges under construction. Trinity recently began construction for two 260' LPG barges. Matson is about to take delivery of a new \$9 million RO/RO barge for its Hawaiian service.

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Over the next five years, it is expected that orders will gradually increase to 15 to 20 large seagoing barges annually - providing a five year market of \$300 to \$360 million.

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40,000 DWT PRODUCT CARRIERS

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The market is cloudy. MarAd predicts a declining need for domestic product carriers. However there may be a potential for shipboard transportation of the new "reformulated" gasoline blends, because refineries may not be able to use existing pipelines if the reformulation includes alcohol.

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Sec. 1104 B. (a) Notwithstanding the provisions of this title, except as provided in subsection (d) of this section, the Secretary, upon the terms the Secretary may prescribe, may guarantee or make a commitment to guarantee, payment of the principle of and interest on an obligation which aids in financing and refinancing, including reimbursement to an obligator for expenditures previously made, of a contract for construction or reconstruction of a vessel or vessels owned by citizens of the United States which are designed and to be employed for commercial use in the coastwise or intercostal trade; or in foreign trade as defined in section 905 of this Act if -

- (1) the construction or reconstruction by an applicant is made necessary to replace vessels the continued operation of which is denied by virtue of the imposition of a statutory mandated change in standards for the operation of vessels, and where, as a matter of law, the applicant would otherwise be denied the right to continued operating vessels in the trades in which the applicant operated prior to the taking effect of the statutory or regulatory change;
- (2) the applicant is presently engaged in transporting cargoes in vessels of the type and class that will be constructed or reconstructed under this section as replacements only for vessels made obsolete by the statute;
- (3) the capacity of the vessels to be constructed or reconstructed under this title will not increase the cargo carrying capacity of the vessels being replaces; and
- (4) the Secretary has not made a determination that the market demand for the vessel over its useful life will diminish so as to make the granting of the guarantee fiduciarilly imprudent.

Our marketing group has been following:

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Exhibit 1 shows the age and replacement/retrofit timing for moderately sized product carriers (20,000 - 45,000 DWT). There are thirty-four (34) product carriers delivered before 1967 with neither double bottoms nor double sides. They are all steam driven and due out by January 1, 1995. Because of their age and steam propulsion, reconstruction of the tankage areas only (like BP) may be questionable. Reconstruction including replacement of steam with diesel drive (as currently preferred), also may or may not be economically feasible. Between 1967 and 1973 there are fifteen (15) vessels, four of which are already not available for reconstruction. The age of these (19 - 25 years old) indicates that enough useful life may still exist in their propulsion system to rebuild their tankage sections. Two (Falcon class) already have diesel reduction propulsion. In addition the most current MarAd RFP calls for owners to sell 1976 or later tankers with diesel propulsion to the government. It does not look like those are many U.S. flag vessels to meet these requirements. The RFP allows the purchase of U.S. and foreign vessels. All are candidates for replacement with new construction, but as can be seen by Crowley, Texaco, and Mobil, the U.S. shipyards can not make a financially attractive offer.

WRECKED VESSEL ACT:

Interestingly a foreign vessel wrecked within U.S. coastal waters may be turned into a JONES ACT vessel provided it is more than 75 percent rebuilt in a U.S. shipyard. This part of the law has been used to rebuild salvaged ships into U.S. chemical carriers—usually between 25,000 - 50,000 DWTs.

There has been a bulk carrier which was recently brought to San Francisco after being salvaged. It was constructed in China in 1981. An opportunity may exist from isolated cases of salvaged vessels, where a new joint venture tankage section that meets OPA 90 could be added to an engine aft vessel and meet a JONES ACT determination.

EXHIBIT 1
20 - 65K DWT TANK SHIPS

| | | |
|--|--|---|
| <u>Pre - 1955 (delivered)</u> STAR OREGON (ST) CONCHO (STE) PECOS (STE) GUADALUPE (STE) COLORADO (STE) STAR MISSISSIPPI (STE) | | RETIRED/ RETROFITTED BY JAN 1, 1995 |
| <u>1955 - 1957</u> COASTAL NEW YORK (ST) SANTA PAULA CLASS (ST) EXXON GETTYSBURG CLASS (ST) MAUMEE CLASS (ST) BALTIMORE TRADER (ST) | 5 vessels 3 vessels - one MarAd RES FLT 4 vessels - two MarAd RES FLT, two RRF | JAN 1, 1996 |
| <u>1958 - 1960</u> EXXON BALTIMORE CLASS (ST) SANTA PAULA CLASS (ST) EXXON GETTYSBURG CLASS (ST) MONTRACHET CLASS (ST) WESTERN SUN CLASS (ST) FREDERICKSBURG (ST) NACHES (ST) TEXAS SUN (ST) | 2 vessels 2 vessels - one RRF OPDS 1 vessel - one MarAd RES FLT 4 vessels 2 vessels rebuilt in 1980 | JAN 1, 1997 |
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Notes: ST = Steam Turbine
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CONTAINER AND RO/RO VESSELS

Over the next 10 years, there maybe a need to replace over 30 vessels. However, the President has stated the intention to not reauthorize the OPERATING DIFFERENTIAL SUBSIDY program. This program has the four operators: APL, LYKES, FARRELL and WATERMAN up in the air with threats to go to foreign registry and foreign built replacements. A resolution is not seen until the government straightens out its policy. MATSON is building a tug-barge combination for it second new RO/RO vessel. We also hear that ATLANTIC MARINE has been awarded a RO/RO for a Norwegian firm at its Mobile, Alabama facility.

FERRIES

There has been and should continue to be a market for ferries and small passenger vessels. The needs on the west coast may be limited to San Francisco Bay, Puget Sound, and Alaska. Most of the upcoming orders will probably be for middle and eastern America. However, we are tracking a procurement by the state of Washington for larger ferries, estimated to be \$70M apiece. Also we are aware that the state of Alaska will be putting a request for proposal out in the next few weeks to design new ferries.

OTHER VESSELS

Building of river tugboats and river barges should expand as the inventory from the 1970's age. However, this again should be a middle America market. Coastal and harbor tugs should not be a significant enough market anywhere. Gambling vessels along the Mississippi and Ohio rivers appears to be a growth area, but regional for the gulf ship yards. Prison type barges are also a potential market, however most of the need is on the east coast, with the possible exception of an opportunity with Los Angeles.

II. U.S. NAVY SHIPS

The prohibition of the "Buy American Act" placed into U.S. Navy contracts for building and rebuilding, is less onerous than the Jones Act for private vessels. For instance, midbodies have been rebuilt abroad and inserted when the Navy "jumboized" some tankers. Therefore opportunities may exist to build or rebuild for the government as follows:

- A. Sealift Ships
- B. Support Ships
- C. Smaller Vessels

SEALIFT SHIPS

Sealift funding appears to have defense priority, even during the time of reduced DOD budgets. The Navy plan calls for 7-11 billion dollars in building, they currently have money to embark on a build/rebuild program. Nine shipyards were chosen for a design competition and those proposals have been submitted to PMS 377. It is expected that three vessels will be built by two shipyards. In the short term, MarAd has a solicitation out to buy U.S. and foreign owned vessels to add to their Ready Reserve Fleet. Depending on what they purchase, a rebuilt market should exist for these vessels. Mid term projections by MarAd focus on large RO/RO vessels.

The fight between the Navy and MarAd about who will control the Sealift Program is on going. Current draft language in the bill establishing a "National Defense Sealift Fund," defines "national sealift vessels" as both DOD owned and part of the National Defense Reserve Fleet, including Ready Reserve Force vessels maintained by MarAd. The language states SECDEF will administer the fund. It also requires construction, alteration, or conversion to be accomplished in a U.S. shipyard, but SECDEF may waive it in the interest of national defense. The \$1.2 million earmarked for FY 1993 is being pushed for U.S. Navy execution. Therefore opportunities may exist, but they will be difficult to focus upon.

SUPPORT SHIPS

The Surveillance ships (TAGOS) and Ocean Research ships (TAGS) appear to have continued funding, at least for the next three years. These ships are smaller in size, and not too complex. However, the gulf coast yards have this market cornered right now, with TAMPA SHIP contracted for the new SWATH series.

SMALLER VESSELS

The contracts placed over the past two years by government agencies has been numerous. The significant orders in 1990 were:

- \$91M to Bollinger for (8) U.S. Navy coastal patrol boats
- \$5M to Halter Marine for (3) U. S. Navy 77 foot PCFs
- \$13M to Swiftships for (2) U.S. Navy 88 foot survey vessels

In 1991:

- \$38M to Halter Marine for (17) U.S. Navy patrol craft
- \$4M to Oregon Iron for (1) U.S. Navy 65 foot EOD support craft
- \$1.5M each to Marinette, Halter, and Bollinger for one each U.S. Coast Guard buoy tender
- \$3.8M to Swiftships for (1) U.S. Navy 40 foot riverine patrol craft
- \$21.8M to Halter Mariner for (1) Corps of Engineers towboat/ inspection vessel.

In the future Foreign Military Sales (FMS) program, Navy Special Operations Forces, Coast Guard, and NOAA appear to be funded to pursue patrol boat, buoy tender, and oceanographic vessel replacements. These could turn into multi-vessel, multi-year contracts that offer prospect to a manufacturing type setup. We expect a better picture on these procurements by summer.

phone message

| | |
|--------------------------------------|--|
| FOR <u>MR OVRUM</u> | DATE <u>6.26</u> TIME <u>9:36</u> <u>AM</u> |
| M <u>ABE</u> | <input type="checkbox"/> URGENT |
| OF <u>Universal Enterprises</u> | <input checked="" type="checkbox"/> PHONED |
| PHONE (<u>714</u>) <u>758-0425</u> | <input type="checkbox"/> RETURNED YOUR CALL |
| AREA CODE NUMBER EXTENSION | <input checked="" type="checkbox"/> PLEASE CALL BACK |
| MESSAGE _____ | <input type="checkbox"/> WILL CALL AGAIN |
| _____ | <input type="checkbox"/> WAS IN |
| <u>911M</u> | <input type="checkbox"/> WANTS TO SEE YOU |
| SIGNED _____ | |

Cnt: This concerns a bid to build three four (4)
 coastal vessels for an Egyptian that I sent off
 to HALLA. He wants a \$ by MONDAY 6/29.
 I said our marketing people were working it, but
 we had not made a decision. Actually
 HALLA may or may not want to give us a
 number. So far nothing hard.

AL

cc: Bill Eavin

FEASIBILITY STUDY

on

**Business Activities for Building and
Rebuilding U.S. Vessels
Over The
Next Eight Years**

BUILD AND REBUILDING OPPORTUNITIES

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ALASKAN CRUDE CARRIERS

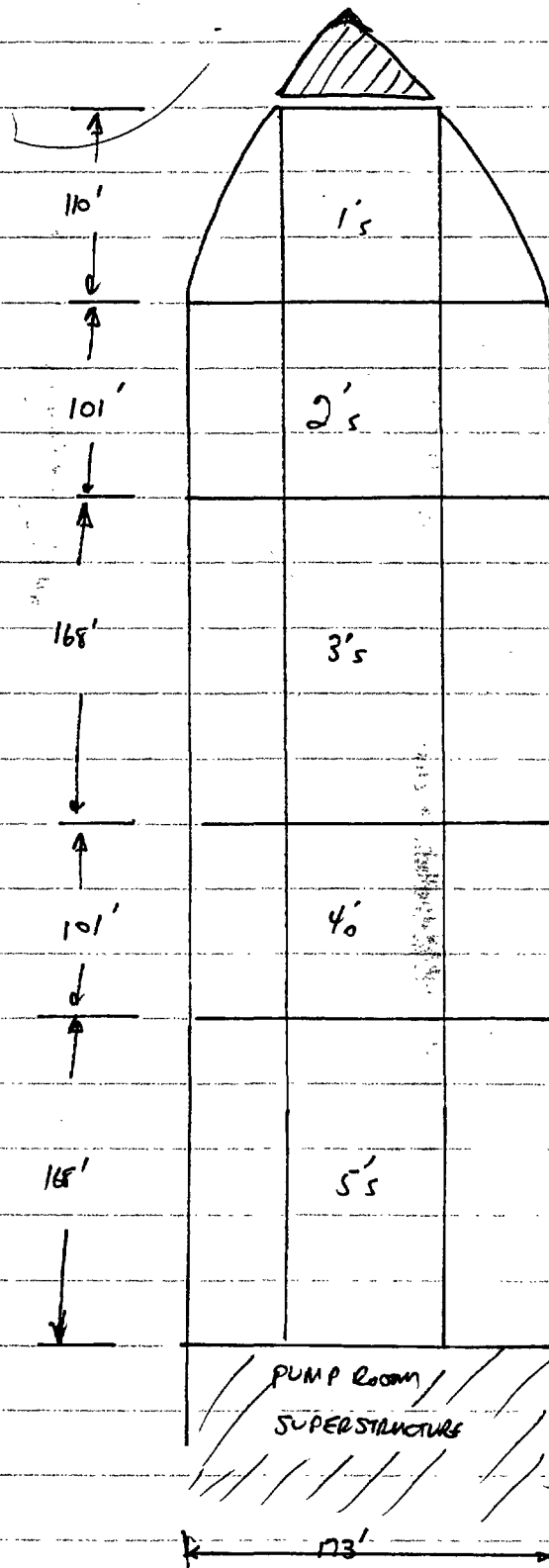
U.S. - Jones Act Vessels

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Current size



75' depth at deck edge
78' " " 64

LT SHIP 23,863.61 LT

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Building of river tugboats and river barges should expand as the inventory from the 1970's age. However, this again should be a middle America market. Coastal and harbor tugs should not be a significant enough market anywhere. Gambling vessels along the Mississippi and Ohio rivers appears to be a growth area, but regional for the gulf ship yards. Prison type barges are also a potential market, however most of the need is on the east coast, with the possible exception of an opportunity with Los Angeles.

II. U.S. NAVY SHIPS

The prohibition of the "Buy American Act" placed into U.S. Navy contracts for building and rebuilding, is less onerous than the Jones Act for private vessels. For instance, midbodies have been rebuilt abroad and inserted when the Navy "jumboized" some tankers. Therefore opportunities may exist to build or rebuild for the government as follows:

- A. Sealift Ships
- B. Support Ships
- C. Smaller Vessels

SEALIFT SHIPS

Sealift funding appears to have defense priority, even during the time of reduced DOD budgets. The Navy plan calls for 7-11 billion dollars in building, they currently have money to embark on a build/rebuild program. Nine shipyards were chosen for a design competition and those proposals have been submitted to PMS 377. It is expected that three vessels will be built by two shipyards. In the short term, MarAd has a solicitation out to buy U.S. and foreign owned vessels to add to their Ready Reserve Fleet. Depending on what they purchase, a rebuilt market should exist for these vessels. Mid term projections by MarAd focus on large RO/RO vessels.

The fight between the Navy and MarAd about who will control the Sealift Program is on going. Current draft language in the bill establishing a "National Defense Sealift Fund," defines "national sealift vessels" as both DOD owned and part of the National Defense Reserve Fleet, including Ready Reserve Force vessels maintained by MarAd. The language states SECDEF will administer the fund. It also requires construction, alteration, or conversion to be accomplished in a U.S. shipyard, but SECDEF may waive it in the interest of national defense. The \$1.2 million earmarked for FY 1993 is being pushed for U.S. Navy execution. Therefore opportunities may exist, but they will be difficult to focus upon.

SUPPORT SHIPS

The Surveillance ships (TAGOS) and Ocean Research ships (TAGS) appear to have continued funding, at least for the next three years. These ships are smaller in size, and not too complex. However, the gulf coast yards have this market cornered right now, with TAMPA SHIP contracted for the new SWATH series.

SMALLER VESSELS

The contracts placed over the past two years by government agencies has been numerous. The significant orders in 1990 were:

- \$91M to Bollinger for (8) U.S. Navy coastal patrol boats
- \$5M to Halter Marine for (3) U. S. Navy 77 foot PCFs
- \$13M to Swiftships for (2) U.S. Navy 88 foot survey vessels

In 1991:

- \$38M to Halter Marine for (17) U.S. Navy patrol craft
- \$4M to Oregon Iron for (1) U.S. Navy 65 foot EOD support craft
- \$1.5M each to Marinette, Halter, and Bollinger for one each U.S. Coast Guard buoy tender
- \$3.8M to Swiftships for (1) U.S. Navy 40 foot riverine patrol craft
- \$21.8M to Halter Mariner for (1) Corps of Engineers towboat/ inspection vessel.

In the future Foreign Military Sales (FMS) program, Navy Special Operations Forces, Coast Guard, and NOAA appear to be funded to pursue patrol boat, buoy tender, and oceanographic vessel replacements. These could turn into multi-vessel, multi-year contracts that offer prospect to a manufacturing type setup.

1992-08-12 17:00 HEEREMAC U.O.F. LEIDEN

71 313260 P.01

| | |
|-----------------------|---------------------|
| Date : 12 August 1992 | DCC Reg. no : 15247 |
|-----------------------|---------------------|

HEEREMAC

Offshore Installation Contractors

Vondellaan 47, 2332 AA Leiden, The Netherlands

Phone : (071) 351535

Telex : 32483

Fax : (071) 313868

Mailing address : P.O. Box 9321, 2300 PH Leiden, The Netherlands

FAX - MESSAGE

| | |
|-----------------------------------|--|
| To | : North West Marine Inc./Portland Oregon U.S.A. |
| Attn | : Mr. Donald E. Nugent |
| Fax no | : 09-1-503.240.6600 (or 6272) |
| Copy to | : S.R.S. |
| Attn | : <u>Mr. J. Morrison</u> |
| Fax no | : 09-44-71-928-5265 |
| Copy to | : Heerema Norge/Oslo |
| Attn | : Knut Feldmann |
| Fax no | : |
| Copy to | : Balder |
| Attn | : Marius v.d. Worm |
| Fax no | : |
| Copy to | : E. Mulder/W.v.d. Wetering/M. Marges/H. van Iddekinge |
| Attn | : |
| Fax no | : |
| Originator: R. de Knecht | Department : TSD |
| Project no: GCC 700 | Please refer to this project no and message name. |
| Msg name : F92139kv | |
| Total pages, incl coversheet : 11 | Verified by: RdK |

Subject : Hircr's work on barge GCC 700

Our ref.no.: L/HeMc/92/222-365

Message :

See attached sheet.

- 2 -

Our ref.no.: L/HeMc/92/222-365

Mr. Nugent,

We, Heeremac (as hirer of barge GCC 700) like to carry-out work on the barge on our account.

We send to supervising R & M work P. van Tol, ballast engineer and a superintendent M. v.d. Worm to coordinate the work as per attached scope of work.

1. Barge level survey. This to be carried-out as soon as possible and before drydocking and later one more time after drydock, before sailing work to be carried-out by your yard or subcontractor.
2. Skid beam relocating as per attached scope of work.

Please quote your best price for this work and time involved.

With kind regards,

R. de Knecht.



SCOPE OF WORK

1. Launch barge level survey specification (attached).
2. Skid beam relocating and height adjustment.

The skid beams have to be relocated from fr 18 thru 76 to a distance of 11.500 mm from centre line on each side (see drawing H1-102-10-1 in launch barge level survey).

Therefore the skid beams to cut loose from deck and in 14 sections of 40 tons each to be lifted to the new location.

As the height have to be increased by 340 mm we want to install the skid beams on temporary steel supports (beams) at a height of 400 mm (two or three beams per skid beam). The skid beams to be seafastened for transport.

We will in Holland re-align and final install the skid beams on proper supports and relocate also the tilting beams.

NORSK HYDRO
BRAGE PROJECT
BLOCK 31/4

/ LAUNCH BARGE LEVEL SURVEY SPECIFICATION

Prepared by : Heerema Norge A/S, Sandvika
Contract No. : 30-1A-NH-B82-00014
HNO doc.No. : 001.027-HNO-RE-150-10-0

| Rev. | Date | Prep. | Description | Check | Check Proj. | Appr. Eng. | Appr. Client |
|------|----------|-------|-----------------|-------|----------------|---------------|-----------------|
| A | 07.08.92 | KF | For Information | Kf | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

I N D E X

- 1.0 INTRODUCTION**
- 2.0 SCOPE OF WORK**
- 3.0 MEASUREMENT TOLERANCES**
- 4.0 DRAWINGS**

1.0 INTRODUCTION

Barge GCC-700 will be utilised for transportation of the Norsk Hydro Brage Jacket to its offshore location, where it will be launched from the barge into the water.

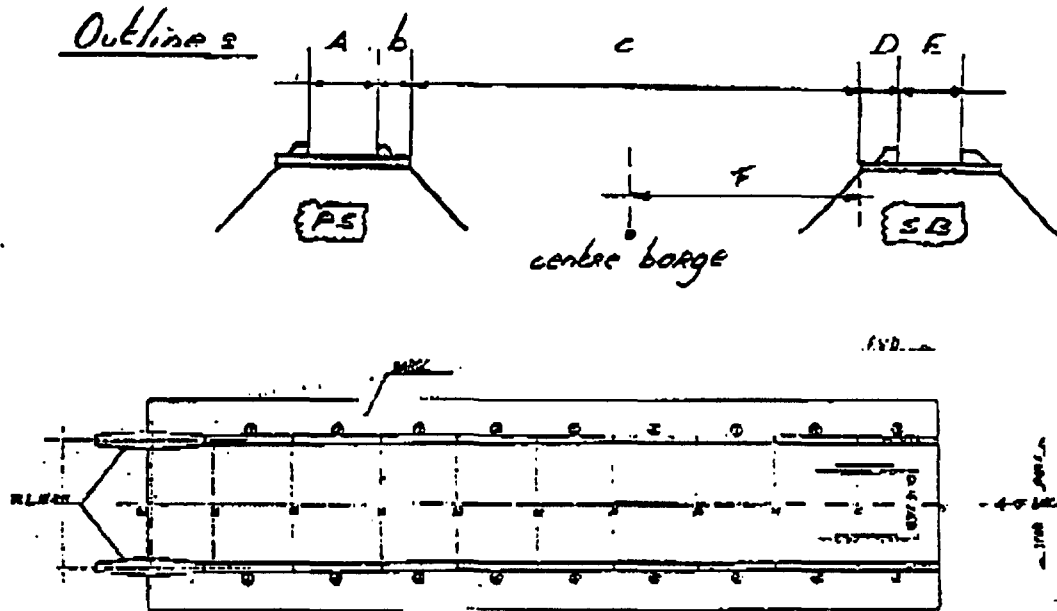
The Brage Jacket with a load-out weight of 17800 m.T is under construction at Aker Verdal yard in Norway. The GCC-700 will be loaded over the stern while the barge is grounded. Load-out is scheduled to take place March 1993.

For engineering purposes and preparation activities of the launch barge for the Brage Project, a level survey of the launch barge is required. This specification describes the scope of work of the launch barge level survey.

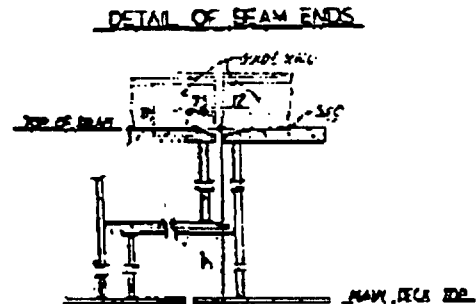
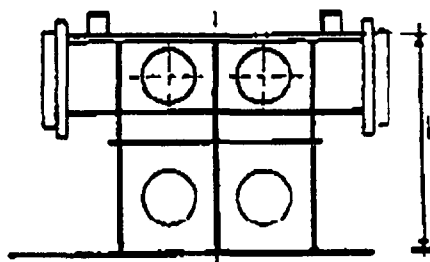
2.0 SCOPE OF WORK

The following activities have to be performed during the level survey of barge GCC-700:

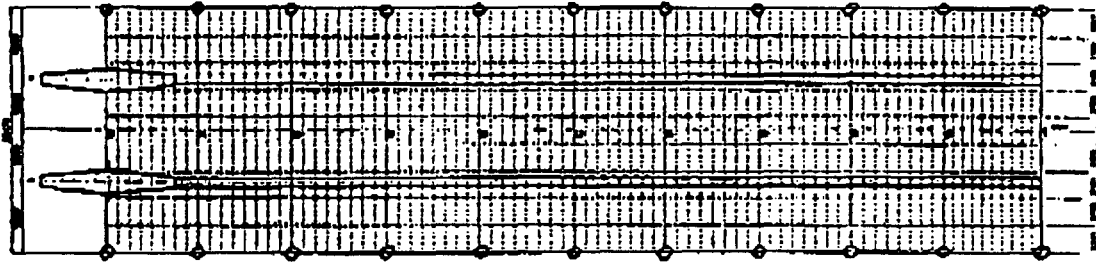
1. During the level survey the barge should not be in ballasted condition. All tanks should be empty, if possible. No large loads should be on deck of the barge. For any load larger than 1 m.T, the accurate position and weight of the load have to be identified a general lay-out of the barge during level survey.
2. Measurement of the actual skid beam location. The dimensions as indicated in the following sketch have to be measured at both ends of each part of the skid beam and tilting beam:



3. The actual skid beam height at each frame has to be measured for all skid beam parts. Possible shim height underneath the skid beam have to be identified as well. At the connection between two parts, the overall skid beam height and the height of possible shims between the two skid beam parts have to be measured. Straightness of the skid beam in actual position have to be determined by measuring level of skid beams on each frame.

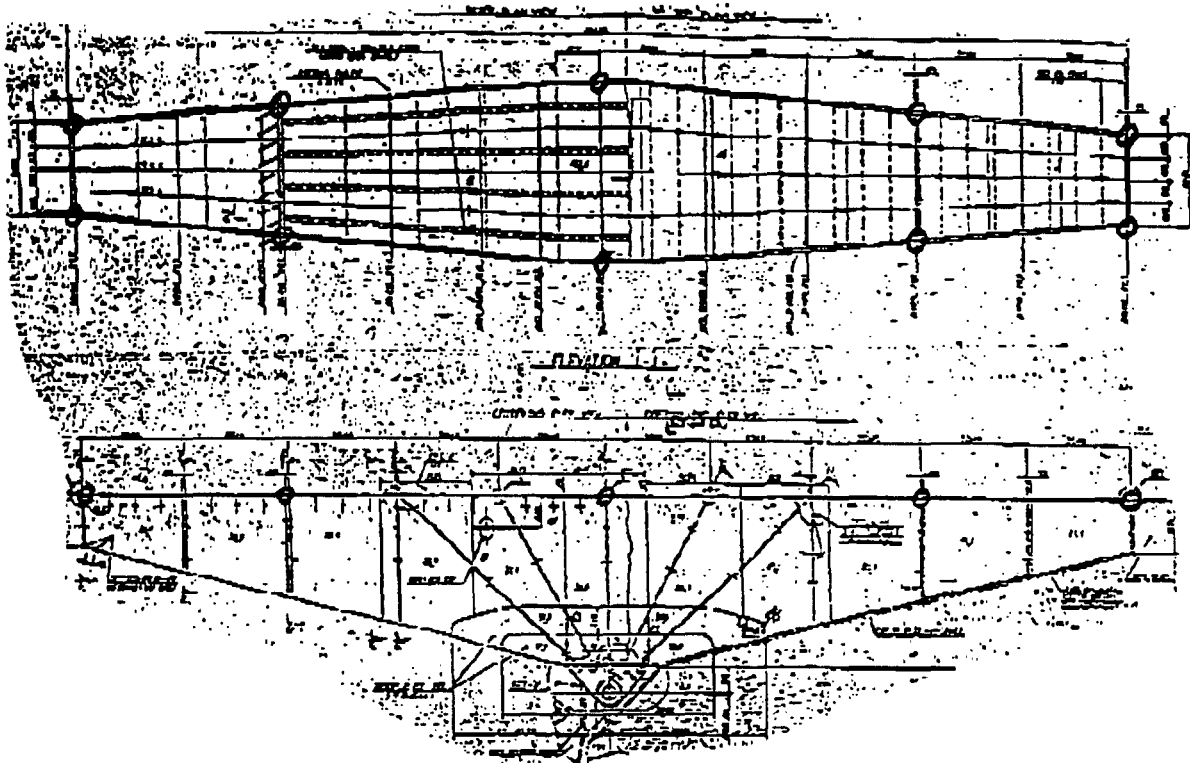


4. The barge draught in which the barge was surveyed have to be determined. Draught to be measured at each side of the barge at bow, centre and stern.
5. The level of each transverse bulkhead have to be measured at both port side and starboard side shell of the barge. See sketch overleaf.



Points of bulkheads to be measured

6. A level survey of the barge deck, on the place where the skid and tilting beams will be placed for the Brage Project (centre line skid and tilting beams 11500mm from centre line barge), have to be performed. The level of each frame has to be measured. The results have to be filled out on the enclosed level survey drawing of the barge. All barge tanks have to be sounded in order to determine the accurate ballast condition of the barge. Further temperature of both air and water and wind speed have to be measured.
7. A level survey of each tilting beam have to be performed in order to determine the actual shape of the tilting beam. Tilting beam level to be measured at the following points:



3.0 MEASUREMENT TOLERANCES

1. Barge draught to be measured with a tolerance of ± 10 mm.
2. Sounding of all the ballast tanks to be determined with a tolerance of ± 10 mm.
3. All level measurement to be performed with a tolerance of ± 1 mm.

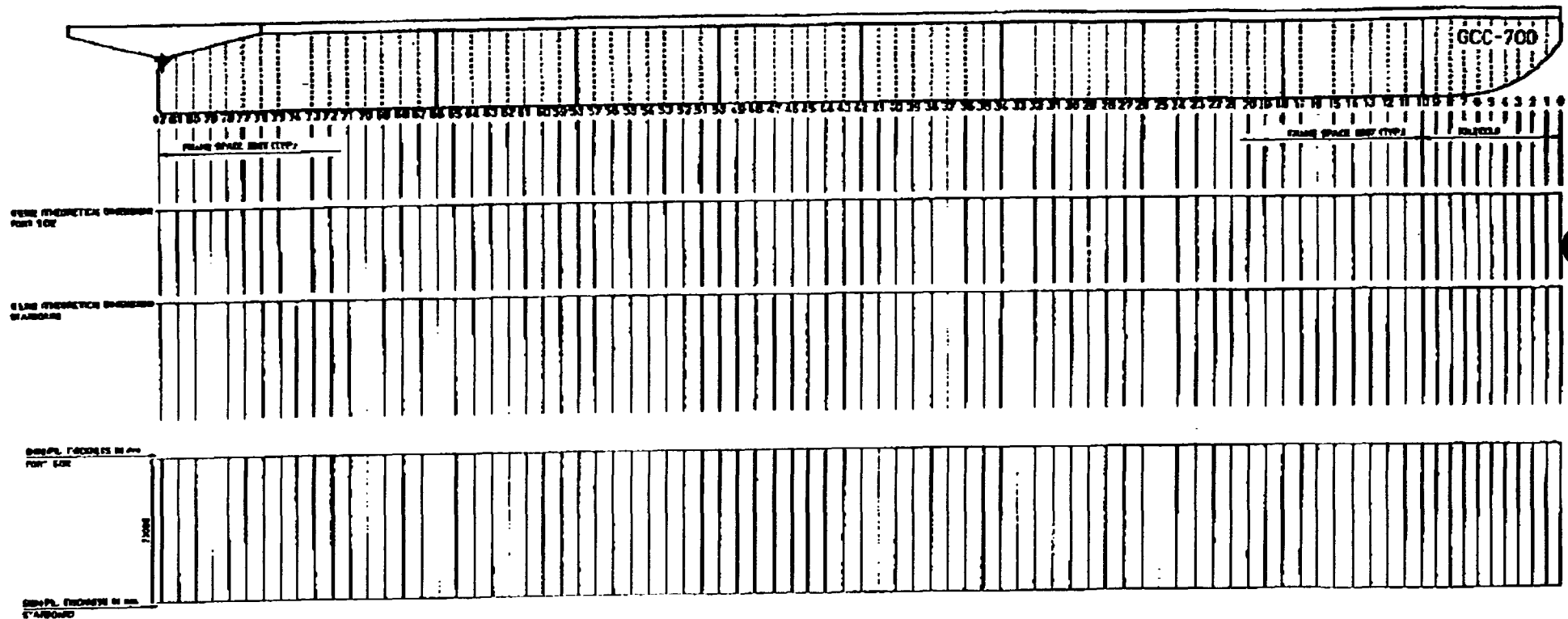
4.0. Temperatures

The ambient temperature to be recorded
during level measurement

The seawater temp. to be measured and recorded.

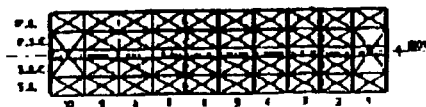
4.0 DRAWINGS

ELEVATION ON BARGE SHOWING FRAME NUMBERS



BALLAST CONDITIONS

MEASUREMENTS TAKEN 10-10-1982



GENERAL NOTES

1. SURVEY PERFORMED
2. LEAKAGE VALVE
3. OBSERVER
4. VESSEL TYPE
5. LOCATION
6. ALL DIMENSIONS IN MM

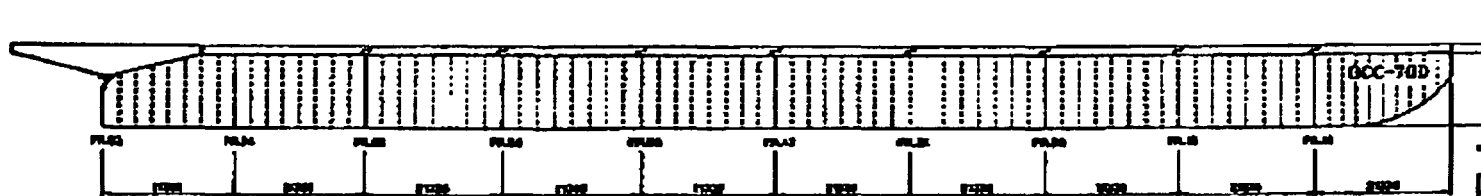
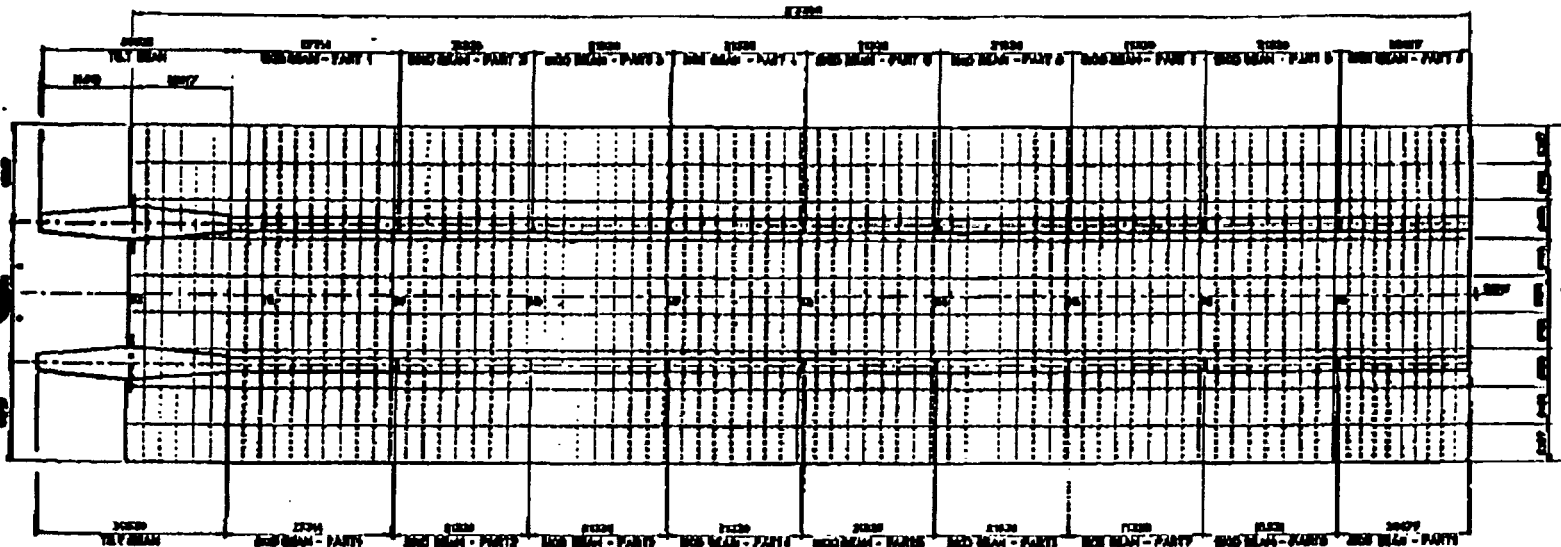
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|---------|---|----------|---|------|---|----------|---|---------|---|
| P.A. 1 | 0 | P.A.C. 3 | 0 | C. 1 | 0 | S.A.C. 3 | 0 | S.A. 1 | 0 |
| P.A. 2 | 0 | P.A.C. 4 | 0 | C. 2 | 0 | S.A.C. 4 | 0 | S.A. 2 | 0 |
| P.A. 3 | 0 | P.A.C. 5 | 0 | | | S.A.C. 5 | 0 | S.A. 3 | 0 |
| P.A. 4 | 0 | P.A.C. 6 | 0 | | | S.A.C. 6 | 0 | S.A. 4 | 0 |
| P.A. 5 | 0 | P.A.C. 7 | 0 | | | S.A.C. 7 | 0 | S.A. 5 | 0 |
| P.A. 6 | 0 | P.A.C. 8 | 0 | | | S.A.C. 8 | 0 | S.A. 6 | 0 |
| P.A. 7 | 0 | P.A.C. 9 | 0 | | | S.A.C. 9 | 0 | S.A. 7 | 0 |
| P.A. 8 | 0 | | | | | | | S.A. 8 | 0 |
| P.A. 9 | 0 | | | | | | | S.A. 9 | 0 |
| P.A. 10 | 0 | | | | | | | S.A. 10 | 0 |

| | | | |
|-------------------|--|--------|--|
| HYDRO | | BRIDGE | |
| BARGE GCC-700 | | | |
| LEVEL SURVEY | | | |
| HEEREMA NORDE A/S | | | |
| 001.027 | | | |
| CB - D18 - 50 - 3 | | | |
| A | | | |

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HEEREMC V.O.F. LEIDEN

1992-08-12 17:05



| | |
|---|-------------------|
| HYDRO BRACE | |
| SKEDEAN ON CARGO BARGE OCC-700 GENERAL ARRANGEMENT | |
| HEEREMA NORGE A/S | |
| 1:400 | |
| 001.027 | HI - 102 - 10 - 1 |



February 21, 1992

Captain Arvid Lingaas
Senior Vice President
Holland America Line Westours, Inc.
300 Elliott Avenue, West
Seattle, Washington 98119

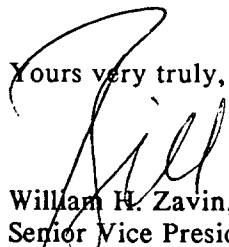
Dear Arvid:

Thank you very much for the opportunity to submit a proposal to perform work on the NIEUW AMSTERDAM. We all appreciate very much your interceding on our behalf to give us this chance to compete.

Attached to this letter is our proposal from our Portland yard to your company. We have asked John O'Donnell to deliver it to you personally so that we are certain that we stay within the bid deadline that has been set. We all want to assure you of our fervent interest in pursuing your company's work now and in the future.

Please let me know if there is anything further that we can do for Holland America.

Yours very truly,


William H. Zavín, II
Senior Vice President
Commercial Contracting Activities

Enclosure



February 21, 1992

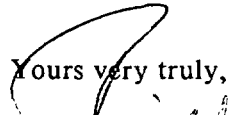
Captain Arvid Lingaas
Senior Vice President
Holland America Line Westours, Inc.
300 Elliott Avenue, West
Seattle, Washington 98119

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Please let me know if there is anything further that we can do for Holland America.

Yours very truly,


William H. Zavín, II
Senior Vice President
Commercial Contracting Activities

Enclosure



BY TELECOPIER - (503) 240-6600

September 24, 1990

Northwest Marine, Inc.
P.O. Box 3109
Portland, Oregon 97208

Attn: General Manager

Re: ms WESTERDAM

Dear Sirs:

Reference is made to that certain Contract for Repair of a Commercial Passenger Vessel, dated August 15, 1990, between Holland America Line-Westours Inc. and Northwest Marine, Inc., relating to the ms WESTERDAM (the "Contract").

As you are aware, Part I(K) of the Contract provides for arrival of the ship at drydock no later than 16.00 hrs. on September 23, 1990 and departure no later than 12.00 hrs. on September 30, 1990. Despite timely arrival of the ship at your facilities, the ship remains in the water due to the presence of another vessel in the drydock. Most recently, you have advised us that the earliest possible time for taking the Westerdam out of the water and putting it in the drydock is now Wednesday morning, September 26. You have further advised us that you are unable to even guarantee that time.

Given these delays, it is clear to all parties that Northwest Marine will be unable to complete the work within the time period provided in the Contract. As a result, our personnel will determine to what extent the work must now be deferred and/or performed at another facility. Additional costs attributable to that deferral and/or work elsewhere will be determined and will be for the account of Northwest Marine.

A substantial portion of the work cannot, however, be deferred but instead must be performed at Northwest Marine before the ship takes on passengers. You should be aware of the fact that the Westerdam is scheduled to leave Portland on September 30th with passengers. If we are unable to make that schedule, substantial additional costs will be incurred. We will hold Northwest Marine liable for those additional costs.

You should be aware that these costs due to late departure increase significantly with each day of delay. For example: having to reroute passengers to different cities involves airline and hotel expenses as well as refunds to passengers.

We would encourage you to take such actions as may be required in order to insure the earliest possible time for getting the

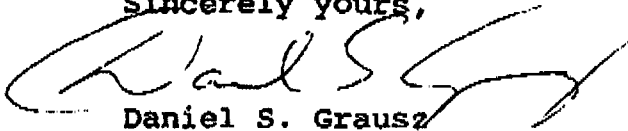
300 Elliott Ave. West
Seattle, WA 98119
206-281-3535
Telex: 160564 HALW SEA
FAX: 206-283-2687 or 206-281-7110

NWMAR131241

Northwest Marine, Inc.
September 24, 1990
Page 2

Westerdam into drydock. We also trust that once the ship is in drydock, you will assign the needed personnel to perform the work as expeditiously as possible (including overtime and weekends if required). It is incumbent upon Northwest Marine to do everything within its power to insure compliance with the Contract to the maximum extent possible.

Sincerely yours,



Daniel S. Grausz
General Counsel

cc: A. Kirk Lanterman
Arvid Lingaas
Nanne Hogendoorn



A DIVISION OF SOUTHWEST MARINE, INC.

P.O. Box 3109 • Portland • Oregon • 97208 • 5555 N. Channel Ave. • Bldg 2 • Portland • Oregon • 97217
(503) 285-7557 • TWX: 910-464-6107 NORMARINE PTL • FAX: (503) 240-6600



August 16, 1990

Holland America Lines
300 Elliott Avenue West
Seattle, WA 98119

Attention: Mr. N. Hogendoorn
Director Technical Operations

Subject: M/V WESTERDAM
Contract/General Conditions

Gentlemen:

We are pleased to enclose herewith two (2) copies of the contract and general conditions duly signed and executed by Mr. William M. Johnston, Senior Vice President and General Manager.

Please return one (1) copy duly signed and executed by Holland America Lines Chief Executive Officer.

Thank you.

Very truly yours,

A handwritten signature in dark ink, appearing to read "N. Calley", is written over the typed name.

Nicholas G. Calley

SOUTHWEST MARINE DIVISIONS: SAN DIEGO • SAN PEDRO • SAN FRANCISCO • SAMOA • NORTHWEST MARINE, PORTLAND, OREGON

CORPORATE HEADQUARTERS

Foot of Sampson Street • P.O. Box 13308 • San Diego • California • 92113-0308 • (619) 238-1000 • TWX: 910-335-1167 SWM SDE • FAX: (619) 238-0934

NWMAR131243

CONTRACT FOR REPAIR
of a
COMMERCIAL PASSENGER VESSEL

AGREEMENT, dated this 15th day of August, 1990, between NORTHWEST MARINE, INC., an Oregon corporation ("Yard"), and HOLLAND AMERICA LINE-WESTOURS INC., a Washington corporation ("HALW"), with respect to certain repair work to be done by YARD on the ms WESTERDAM, a commercial passenger vessel of Bahamian registry (the "Vessel") that is owned by HAL SHIPPING LTD., a British Virgin Islands corporation for which HALW acts as agent, and which is engaged in the transport of passengers throughout the world.

The parties, having agreed upon certain commercial ship repair work to be done on the Vessel by YARD, hereby covenant and agree as follows:

PART I. STATEMENT OF WORK.

(A) Work Description. YARD agrees to furnish the materials, parts, supplies, tools, facilities, components, drawings, utilities and labor to perform the work described on Exhibit A hereto, as such may be modified, increased or decreased by Change Order (the "Work"). Other than as to planning and other preliminary matters included in the Work, the Work shall be performed at YARD's drydock facilities in Portland, Oregon.

(B) Compliance With Requirements Applicable to Vessel. YARD shall be responsible for performing and completing the Work in accordance with the applicable requirements (if any) of all governmental and regulatory authorities having jurisdiction over the Vessel including, without limitation, the U.S. Coast Guard, the U.S. Public Health Service and the Classification Society for the Vessel. YARD shall further be responsible for insuring that, upon conclusion of the Work, the Vessel is not in violation of any such requirements as a direct consequence of the Work having been performed.

(C) Inspection of Work. HALW shall have the right to inspect the progress of the Work at all times. HALW's inspection of the Work, or its failure to inspect, shall not in any way alter or diminish the obligations of YARD hereunder.

(D) Shop Drawings. From time to time prior to and during the performance of the Work, YARD shall, at the reasonable request of HALW or upon its own initiative, prepare and furnish to HALW shop drawings with respect to those aspects of the Work where the preparation of shop drawings in advance of actual performance is appropriate. HALW shall promptly review all shop drawings so

provided and approve or disapprove same except that approval shall not be unreasonably withheld. Properly disapproved drawings shall be corrected. Approvals shall not relieve YARD of its warranty obligations provided in Section III(A) below.

(E) Work by HALW. HALW shall, for its own account, have the right to perform work on board the Vessel with ship's crew or called in specialists during the time that the Work is being performed. YARD shall have no liabilities or obligations regarding any such work so performed by or on behalf of HALW. Such work shall be undertaken in such manner as shall not interfere with the performance of the Work by YARD. If in the performance of such work HALW or such specialists shall be negligent or reckless and such shall result in the death of, personal injury to, or damage to the property of, a third party, HALW shall indemnify YARD and hold it harmless from and against any losses, damages, causes of action, liabilities and expenses suffered or incurred by YARD and which result from such death, injury or property damage. YARD shall promptly notify HALW of any claims or causes of action asserted or commenced in respect of which HALW has liability to YARD under the immediately preceding sentence whereupon HALW shall, on behalf of YARD, assume the defense thereof through legal counsel selected by HALW.

(F) Providing of Materials by HALW. To the extent specified on Exhibit A, HALW shall order and pay for directly certain materials, parts and supplies for use by YARD in the performance of the Work. Vendors, specifications and lead order times for all such items shall be as specified by YARD in order to insure that items received are what would have been received had YARD ordered them itself, and are received at the same times as if YARD had ordered them itself. Amounts due YARD under this Agreement are exclusive of the cost of such items.

(G) Quality of Materials etc. All materials, parts, supplies and components used by YARD for the Work shall be suitable for their intended purpose and: (i) of the quality specified in Exhibit A; or (ii) if no quality standard is specified, then of such quality as is consistent with good marine practice.

(H) Authorized Representatives. Each party shall by notice to the other party, from time to time, designate one or more Authorized Representatives who shall have authority to act on behalf of said party for all purposes of this Agreement. Other than the Authorized Representatives, no person shall have authority to obligate a party under this Agreement or relieve the other party of any of its obligations under this Agreement including, without limitation, the execution of Change Orders. Notwithstanding the foregoing provisions of this Section, as to HALW the only persons with authority to amend this Agreement, designate or change Authorized Representatives or execute Change Orders involving an addition to or reduction in amounts otherwise due YARD hereunder of more than \$50,000 shall be HALW's President and HALW's Senior Vice President-Cruise Operations. Notwithstanding the foregoing

provisions of this Section, as to YARD the only persons with authority to amend this Agreement, designate or change Authorized Representatives or execute Change Orders involving an addition to or reduction in amounts otherwise due YARD hereunder of more than \$50,000 shall be YARD's General Manager. The initial Authorized Representatives of YARD is the YARD General Manager. The initial Authorized Representative of HALW is Nanne Hogendoorn.

(I) Disposal of Items Removed From Vessel. Any materials, parts, components or other items removed from the Vessel in connection with the Work shall, if requested in advance by HALW, be turned over to HALW whereupon HALW shall be responsible for their proper disposal in accordance with the requirements of applicable law. As to all other materials, parts, components and other items removed from the Vessel in connection with the Work, YARD shall be responsible for their proper disposal in accordance with the requirements of applicable law.

(J) Change Orders. In the event that HALW requests any modification, deletion or addition to the Work (as then constituted), the parties shall execute a Change Order which shall specify:

1. the modification, deletion or addition to the Work to be effected pursuant thereto;
2. the increase or decrease in the price for the Work resulting therefrom, provided, however, if the parties are unable to agree on the amount of such increase or decrease, then the Change Order shall still be executed without reference to the change in Price and such Change Order shall be deemed a "Time and Materials Change Order" for purposes of the following provisions of this Agreement; and
3. the change, if any, in the date on which the Work is to be completed.

No such modification, deletion or addition to the Work shall become effective unless and until a Change Order in respect thereof shall have been properly executed. As to any Change Order that is a Time and Materials Change Order: (i) the labor charges shall be \$35.00/hour for straight time labor and \$54.00/hour for overtime labor; (ii) all materials and subcontracts to be charged at YARD's cost; and (iii) additional governmental taxes, assessments and Port of Portland (5.7%) user fees (exclusive of any employment related taxes) shall be passed through without mark-up.

(K) Time Schedule. HALW shall cause the Vessel to arrive at YARD's drydock facilities no later than 16.00 hrs. on September 23, 1990. Subject to Change Order, the Work shall be completed, and the Vessel shall be in a position to leave the drydock facilities, no later than 12.00 hrs. on September 30, 1990, provided, however, YARD shall not be responsible for any delay resulting from any cause or causes beyond the reasonable control of YARD including,

without limitation, Acts of God, war, riots, civil disturbances, labor strikes and priorities or allocations of any public entity having jurisdiction. For these purposes, matters impacting the performance of YARD's subcontractors or vendors shall not be considered beyond the reasonable control of YARD unless they were also beyond the reasonable control of said subcontractor or vendor. The parties shall use their best efforts to minimize the adverse impact of any such delay.

(L) Subcontractors/Vendors. Subcontractors and vendors to be utilized for major or critical areas of the Work shall be subject to the prior approval of HALW, which approval shall not be unreasonably withheld or delayed.

(M) Status of YARD's Employees/No Liens. Neither the employees of YARD nor of any of its subcontractors or vendors shall be considered Vessel crew. YARD shall be solely responsible for the immediate release and discharge of any and all liens that may attach to the Vessel that arise from or are otherwise attributable to the Work or the presence of the Vessel at YARD's facilities (other than liens created by HALW or its affiliates) including, without limitation, mechanics and materialmen's liens arising from the work of YARD, the subcontractors and vendors of YARD and the employees of YARD, its subcontractors or vendors.

(N) General Terms. In furtherance and not in limitation of the provisions of this Agreement, the General Terms for the performance of the Work are attached hereto and incorporated herein by this reference.

PART II. PRICE AND PAYMENT TERMS

(A) Amount. Identified on Exhibit A may be certain items of the Work as to which the parties have not reached agreement as to the price due to uncertainty regarding the amount of labor and materials actually required ("Time and Materials Work"). As to Time and Materials Work: (i) the labor charges shall be \$35.00/hour for straight time labor and \$54.00/hour for overtime labor; (ii) all materials and subcontracts to be charged at YARD's cost; and (iii) additional governmental taxes, assessments and Port of Portland (5.7%) user fees (exclusive of any employment related taxes) shall be passed through without mark-up. HALW agrees to pay the price set forth on Exhibit A plus amounts due for Time and Materials Work computed as above provided, as such may be adjusted by Change Order, in consideration for the Work. The price set forth on Exhibit A plus such amount for Time and Materials Work, as well as any change thereto agreed pursuant to a Change Order, includes all governmental taxes, assessments and user fees due and payable by HALW in connection with the Work including, without limitation, those imposed by the Port of Portland. YARD shall be responsible for the payment of all such taxes, assessments and user fees. Refunds of any such taxes, assessments or user fees realized by HALW or YARD shall be retained by or delivered to HALW, as the case may be, it being agreed that such refunds are the property of

HALW.

(B) Terms. No discounts will be allowed.

(C) Progress Billings. YARD will deliver progress billings by telefax to HALW's Seattle office (206-286-3274; Attn: Cruise Operations) no later than 10:00 a.m. on every Friday during the period the Vessel is in drydock (or if Friday is not a business day, then on the immediately preceding business day) for 100% of the theretofore unbilled and completed portion of the Work. Progress billings shall contain sufficient detail so as to enable HALW to verify their accuracy. 95% of each progress billing shall be remitted to YARD by the close of the business on the immediately following Monday (or if Monday is not a business day, then on the immediately following business day), with the remaining 5% to be retained by HALW for payment together with the final billing payment as hereafter provided. Progress billings will only be made if the drydock period is in excess of ten (10) calendar days.

(D) Final Billing. Final billing for all completed Work not previously billed shall be effected as soon as practical after the completion of the Work. The final billing, together with amounts retained by HALW from progress billings, shall be paid by HALW within 15 calendar days of HALW's receipt of the final billing.

(E) Disputed Billings. In the event that HALW disputes any billing made as above provided and the parties are unable to resolve the dispute prior to the time at which payment is to be effected, HALW shall, if YARD shall so request, cause the amount in dispute to be deposited into an interest-bearing, federally insured commercial bank account in Seattle, Washington from which withdrawals may only be made upon the joint signature of HALW and YARD. Once the dispute has been resolved by the parties or by arbitration as hereafter provided, the amount at issue shall be paid from the account to HALW and/or YARD in accordance with the resolution with interest earned on the account to be allocated pro rata.

(F) Manner of Payment. HALW shall pay each billing by wire transferring the amount due to YARD's account at First Interstate Bank, Portland, Oregon, ABA No. 123-000123 for credit to Account No. 552-001522-9 in the name of YARD.

(G) Overtime Work. For purposes of determining amounts due in respect of Time and Materials Work and Time and Materials Change Orders, work shall be considered overtime work to the extent it is performed on Saturday, Sunday, a legal holiday (as defined by the collective bargaining agreement to which YARD is a party) or to the extent it is performed by workers who have already completed an 8-hour shift on a normal work day but then only to the extent it is performed following the conclusion of the 8-hour shift and during the same 24-hour period in which the 8-hour shift occurred.

PART III. LIMITED WARRANTY

(A) Terms of Limited Warranty. Subject to the provisions hereinafter set forth in this Part III, YARD agrees to remedy (whether by repair or replacement, as necessary), free of charge to HALW, any defects in the Vessel attributable to: (i) the workmanship of YARD under this Agreement; (ii) deficiencies in designs and/or drawings prepared by YARD in connection with the Work; or (iii) the failure of YARD to perform the Work in accordance with the requirements of this Agreement. YARD's liability under this Section III(A) shall extend only to defects discovered by HALW prior to the end of Guarantee Period (as hereafter defined) and in respect of which a timely Warranty Notice (as hereafter defined) is given to YARD.

(B) Guarantee Period. As used in this Agreement, the term "Guarantee Period" shall mean the 180-day period commencing on the day on which all Work is completed, provided, however, that as to any defect as to which a Warranty Notice is timely given during the 180-day period commencing on the day on which all Work is completed, the Guarantee Period shall extend until the end of the first 180-day continuous period during which the no further remedial work is required in respect of such defect. For all purposes of this Section 3(B), there shall be disregarded any days during which the Vessel is not available for service on account of defects which YARD is liable to make good as herein provided.

(C) Deficiency Notice. Claims by HALW against YARD under Section III(A) must be made by written notice from HALW to YARD given prior to the conclusion of the Guarantee Period (a "Warranty Notice"), each such notice to be sent by telefax to YARD at (503) 240-6600, Attn: General Manager.

(D) Remedy of Defects. The remedial obligations of YARD under Section III(A) shall be effected on board the Vessel (so long as such would not interfere with the normal operation or working schedule of the Vessel) or at such shipyard as is designated by YARD which shipyard must be one which would not unreasonably impair or delay the normal operation or working schedule of the Vessel and which is otherwise suitable for the purpose. In the event YARD fails to promptly designate a shipyard meeting the criteria above stated after being requested to do so by HALW, HALW may designate a shipyard suitable for the purpose by notice thereof to YARD. Where such would expedite repair work, YARD shall cause replacement parts to be promptly forwarded to the Vessel. YARD shall perform remedial work on a prompt basis giving due consideration to the severity and impact on HALW of the problem. HALW shall have the right to perform, or cause to be performed, at YARD's expense, the remedial work with HALW's personnel or utilizing third parties: (i) in emergency situations; (ii) in situations where YARD has failed to perform the work on a prompt basis; and (iii) in situations where YARD has agreed to permit such action by HALW. The time permitted YARD to effect the repair work before HALW shall have the right to effect the remedial work shall be determined

giving consideration to the seriousness of the defect and its impact on the operation and working schedule of the Vessel. Any parts or other items installed in connection with any remedial work shall be the property of HALW. All parts or other items removed in connection with any remedial work shall be the property of YARD.

(E) Limitation on Warranty Obligations. YARD shall have no obligation under Section III(A) for defects caused by: (i) normal wear and tear; or (ii) the failure of HALW to operate or maintain the Vessel in accordance with good marine practice.

(F) No Consequential Damages. HALW accepts the risk of, and YARD shall not be liable under Section III(A) for any, incidental, special or consequential damages of any nature whatsoever including, without limitation, claims related to delay or loss of use of the Vessel, lost revenues, lost profits, crew wages or shares, salvage or tug expenses, whether such damages be predicated upon an alleged breach of this Agreement, negligence by YARD, strict liability in tort or upon any other basis whatsoever, provided, however, if the damages are caused by any defect in the Vessel which YARD is liable for the remediation of as provided in Section III(A), then: (i) nothing contained in this Section shall be construed as relieving YARD of its obligation to pay incidental expenses directly related to the performance of such remedial work (such as, for example, drydock fees and tug expenses); and (ii) if the Vessel is required to be out of service as a direct consequence of the performance of such remedial work and, as a result, HALW is able to recoup all or part of its lost revenues under its passage money insurance policies, YARD shall reimburse HALW for the passage money insurance deductible.

(G) Warranties by Subcontractors. YARD's obligations under this Part III are not diminished or relieved by any provision or term of any warranty given by a vendor or subcontractor. If the terms of warranty or guaranty of any vendor or subcontractor are greater or more extensive in subject, time, remedy or any other term than those of YARD under this Part III: (i) YARD's responsibility shall extend to coincide with such warranty or guaranty to the extent such warranty or guaranty is honored by the vendor or subcontractor; and (ii) YARD shall, at HALW's expense, take all steps requested by HALW to obtain said fulfillment.

(H) Warranty of Title. YARD warrants that HALW or the affiliate of HALW that owns the Vessel shall have good and marketable title to each and every part, component or other item placed upon or made part of the Vessel as part of the Work, free and clear of all claims, liens, charges or encumbrances of any nature whatsoever other than those created by HALW or its affiliates.

(I) WARRANTY EXCLUSION. THE WARRANTIES SET FORTH IN THIS PART III ARE GIVEN IN LIEU OF ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY. THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THOSE EXPLICITLY SET FORTH IN THIS PART III. ANY WARRANTY, EXPRESS

OR IMPLIED, THAT THE MATERIALS FURNISHED OR SOLD UNDER THIS AGREEMENT ARE MERCHANTABLE OR FIT FOR ANY PARTICULAR PURPOSE IS HEREBY DISCLAIMED.

PART IV. INSURANCE/POLLUTION MATTERS

(A) Maintenance of Insurance. During the period in which the Work is being performed and thereafter for the duration of the Guarantee Period, HALW shall, at its own expense, maintain and keep in force its customary insurance as to hull and machinery and protection and indemnity. HALW represents and warrants that, under the terms of such policies, coverage does not lapse as a consequence of the Vessel being out of service for the purpose of having the Work or any Part III remedial work performed.

(B) Pollution. HALW shall, during the period the Work is being performed, maintain in effect a Certificate of Financial Responsibility issued by the Federal Maritime Commission. Nothing contained herein shall, however, relieve either party of its liabilities and obligations in respect of environmental pollution resulting from its acts or omissions.

PART V. MISCELLANEOUS COVENANTS.

(A) Ballasting. If the Work contemplates that the Vessel will be hauled, HALW will cause her to be trimmed and ballasted as instructed by YARD.

(B) Safety Regulations. HALW shall familiarize itself and the Vessel's officers with YARD's safety and security regulations and shall cause the crew of the Vessel, and all persons having business with the Vessel, to comply with all YARD's security and/or safety regulations while within YARD's facility including, but not limited to, the use of personal protective gear.

(C) Invalidity. If any one or more of the provisions of this Agreement is found to be legally invalid, this Agreement shall be construed as if not containing such provision and the rights and obligations of the parties shall be construed and enforced accordingly.

(D) Integration and Modification. This Agreement contains the entire agreement of the parties regarding the subject matter hereof, and supersedes all prior discussion, negotiations, understandings, agreements, or representations with respect thereto. It shall not be changed, modified or altered in any way except by written instrument executed by the parties.

(E) Incorporation of Exhibits. Each of the Exhibits is hereby incorporated into and made a part of this Agreement.

(F) No Waiver. A waiver by either party of any right under this Agreement must be in writing and shall not be construed as a waiver of any other right.

(G) Headings. Headings are for convenience only and do not form a part of this Agreement.

(H) No Third Party Beneficiary. This Agreement is intended solely for the benefit of the parties hereto and is not intended to benefit any third person or party.

(I) Right to Review Records. HALW shall, upon request, at all reasonable times (both during and following the conclusion of the Work) be provided with access to, and the right to reproduce, the records and materials supporting all time and materials charges of YARD under this Agreement together with records and materials relating to the payment by, or refunds to, YARD of taxes, assessments or user fees relating to this Agreement. For such period as HALW shall reasonably request, YARD shall provide on-site office facilities (including desks, telephones, fax and copying facilities and other similar facilities as HALW shall reasonably request) for two HALW accounting representatives who are assigned by HALW to monitor accounting aspects relating to the Work. The costs (telephone, copying etc.) incurred by such representatives shall be borne by HALW except that no rent shall be charged HALW for such facilities.

(J) No Improper Payments. Each party covenants and agrees not to offer or make any payment (in cash, in kind or otherwise) to any employee, officer or director of the other party or of any of its affiliates that could be construed as being a bribe or inducement to act or refrain from acting. If any such person shall solicit such a payment from YARD, YARD shall promptly notify the President of HALW by telefax, telefax No. (206) 284-8332. If any such person shall solicit such a payment from HALW, HALW shall promptly notify the General Manager of YARD by telefax, telefax No. (503) 240-6600.

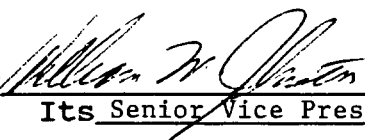
(K) Arbitration. All claims, disputes and controversies between the parties arising out of or relating to this Agreement or the breach thereof shall be decided by arbitration in accordance with the Commercial Arbitration Rules of the American Arbitration Association, subject to the limitations of this subsection. Either party may initiate arbitration proceedings by giving notice to the other of its intent to arbitrate within sixty (60) days after the claim, dispute or controversy has arisen. All said proceedings will be brought in Seattle, Washington. The claim or dispute shall be determined by a single arbitrator. In the event the parties are unable to agree on an arbitrator, the arbitrator shall be appointed by the American Arbitration Association under the Commercial Arbitration rules then in effect. The arbitrator shall determine the claim or dispute in accordance with (i) the language of this Agreement, (ii) the general maritime laws of the United States, and (iii) the laws of the State of Washington. The award rendered by the arbitrator will be final. Judgment may be entered upon it in any court having jurisdiction thereof, and will not be subject to modification or appeal. The prevailing party shall be entitled to recover its reasonable attorney's fees which may be set by the

arbitrator in the same proceeding. The prevailing party shall also be entitled to recover all costs and fees paid for the arbitration.

IN WITNESS WHEREOF, the parties have executed this Agreement on the date set forth opposite their respective signatures.

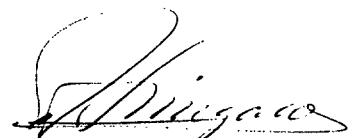
Dated: August 16, 1990

NORTHWEST MARINE, INC.

By 
Its Senior Vice President and General Manager

Dated: August 20, 1990

HOLLAND AMERICA LINE-WESTOURS INC.

By 
Its S. R. F. C. PRESIDENT, CAPTAIN OPS

HAL SHIPPING LTD. hereby acknowledges the authority of Holland America Line-Westours Inc. to act as its agent with respect to the above Contract For Repair of a Commercial Passenger Vessel.

HAL SHIPPING LTD.

By 
A. Kirk Lanterman, President

90-H/DRYDOCK.NWM
8/14/90

CONTRACT FOR REPAIR - GENERAL CONDITIONS

1. The Work will be divided into job numbers which will be utilized for purposes of reference.
2. Bar charts and other planning aids are to be provided by YARD for all critical jobs to ensure efficient operation and provide means of checking progress. YARD will be required to protect all areas where repairs have to be carried out. HALW will protect all decks, alleyways, furniture and carpets as it deems necessary.
3. YARD to keep machinery spaces clean at all times. Inspection to be carried out each day by HALW and YARD representatives. Bilges to be kept free of oil. Any oil joints opened to be closed off with steel blanks. Covers to be fitted when valves are open. All jointing and packing material, including for tank lids, to be supplied by YARD.
4. Fire watches with the necessary firefighting equipment are to be in attendance whenever and wherever hot work is carried out. All such work being carried out must be reported in writing to HALW's Authorized Representative. All inlets to oil fuel tanks such as air and overflow pipes etc. to be blanked off when carrying out hot work. YARD will be responsible for removal of same. All tanks which YARD is working in are to be presented for inspection by HALW Authorized Representative and Classification Society surveyor upon completion of work.
5. Any spillage of oil/wastes etc. when transferring from Vessel to YARD's barge or tanker (shore or sea) even if assistance to YARD is being given by Vessel's pumps, will be the YARD's responsibility.
6. At the commencement of the Work in drydock, the Vessel is to be inspected by the YARD's and HALW's Authorized Representatives to verify cleanliness status; an equal standard of cleanliness is to be present upon Work completion.
7. In the event that YARD is awarded the cleaning of fresh water tanks, it will be responsible for strictly adhering to Rules and Regulations promulgated by USPH for the cleaning of such tanks. All equipment as required by these Rules and Regulations is to be provided by YARD.
8. All prices are inclusive of staging, stripping and temporary lights as necessary and in the case of work in accommodations and on open decks, include cleaning and painting. Where grit blasting is carried out, YARD is to be responsible for the protection of machinery and the cleaning up of the Vessel after completion of

the blasting.

9. All repairs to be tested and adjusted on completion to HALW, Dutch Coast Guard and Classification Society satisfaction. All electrical work to be carried out in accordance with the requirements of the Dutch Coast Guard and Classification Society. All materials used are to comply with latest I.M.O. Regulations as applied to existing ships.

10. If on examination of any item by YARD, deterioration or defects other than those specified to be fixed as part of the Work are found, these are to be reported to HALW Authorized Representative. This applies also to electrical fittings and cables disturbed or exposed when removing panels etc.

11. All workmanship and materials to be of first class quality, similar in size, make etc. to the original, suitable for the purpose intended noting that the Vessel is engaged in the luxury class cruise market. On completion of job items, they are to be inspected by HALW's Authorized Representative before being approved for acceptance. It will be the responsibility of YARD to notify HALW Authorized Representative and relevant surveyors when items on which work has been performed are ready for survey or inspection for acceptance.

12. During the Work, a full crew complement will be living on board for free utilization by HALW on projects involving the maintenance, overhaul, painting, cleaning and modifications of the Vessel and equipment. Vessel crew will not work on any item affecting either the watertight integrity of the Vessel while in drydock, the fire safety system at any time nor any item of the Work itself.

13. There will be on board a number of subcontractors working to the direct order of HALW to carry out on-going repairs and renewals. This work is part of HALW's year round long term maintenance policy. No objection may be raised by YARD to the subcontractors working on board. The same conditions as these appertaining to the Vessel's crew will apply (see clause 12).

14. All YARD's material to be stored off the Vessel except for parts on way to Work location. The YARD's workmen will not be allowed to eat on board the vessel.

15. A central control office will be used on board the Vessel for the joint use of YARD's and HALW's Authorized Representatives. A daily meeting (chaired by HALW Authorized Representative) will be held to monitor progress and to insure satisfactory living conditions for the Vessel's officers and crew.

16. If major subcontracting by YARD is involved, HALW is to be involved in consideration of competitive quotations and on YARD's views concerning the reliability of subcontractors. YARD is responsible for all financial and production details of subcontractors.

17. Any new material used for structural insulation, pipe lagging or joinery work must be "Asbestos Free".

18. To obtain reasonable rest for the Vessel's officers and crew substantial noise from cutting up, machine caulking, chipping, etc. should not be made between the hours of 2300 and 0600. Should this be unduly restrictive so as to impede the progress of the Work, the matter needs to be discussed at the daily meeting.

19. YARD guarantees that it has the necessary new materials and/or parts in stock, or can obtain same without delay, as no extension of time will be allowed in this respect.

20. YARD must ensure that the safety regulations applied during the course of the Work are to be of a standard at least equivalent to those required by O.S.H.A. and State regulatory authorities.

21. At time of Work commencement, YARD will be advised by the HALW Authorized Representative as to the specific HALW personnel that will have responsibility for different aspects of the Work. The list will include Vessel officers in addition to members of the shore based HALW Technical Department who will be in attendance during the course of the Work.

22. Prior to drydocking, the Captain will provide the dockmaster with formal notification of the details of Vessel's draft, trim and stability conditions at docking. The dockmaster is required to provide the Captain with formal notification (prior to the Vessel entering the dock) that the anticipated conditions referred to above are suitable for the dock. Immediately following the completion of the docking procedure, the dockmaster is required to provide HALW Authorized Representative with a positive report that the Vessel is secure and ready for work to proceed. During the time the Vessel is in the dock, the Captain is required to report to the dockmaster any significant changes in weight distribution. Before flooding begins, the GM and trim are to be checked by the Vessel's stability officer and agreed in writing with the Captain and the dockmaster. All shipside openings are to be closed and secured and work on all sea connections completed before flooding commences.

90-G/DRYDOCK.GT
6/25/90

William M. Jones
6/26/90

EXHIBIT A
CONTRACT FOR REPAIR OF A COMMERCIAL PASSENGER VESSEL
MS WESTERDAM
NORTHWEST MARINE, INC.

CONTRACT PRICE: \$550,000.00 (U.S. Dollars)



Holland America Line
Westours Inc.

*Please
Return to
Nick Calley*

July 11, 1990
ref. TD#407-90

Northwest Marine Inc.
5555 North Channel Ave., Bldg. 2
Portland, OR 97217
Attn: Mr. Nick Calley

Dear Sirs,

Westerdam 1990 repairs.

Please find enclosed specifications for the forthcoming drydocking and repairs on this ship. We would look forward to receiving your quotation no later than July 27th.

Arrives Portland September 23 1600 hrs.
Departs Portland September 30 1200 hrs.

All repair work must be finished on September 29 at 1600 hrs. This gives the crew time to prepare the vessel for taking on passengers; and the vessel time to shift to passenger terminal for September 30 0800 hrs.

Enclosed for your guidance and information are our contract for repair of a commercial passenger vessel and contract for repair General Conditions. Your written acceptance of these conditions is required as a pre-requisite to any contract.

Due to the importance of maintaining the ships published cruising program, it will be our intention, prior to placing any contract, to seek evidence from you to satisfy, ourselves on the following aspects of shipyard organization.

- a) Do the working agreements allow sufficient flexibility between trades to the extent that demarcation does not hinder productivity?
- b) Are the manpower and supervision resources adequate to complete the work specified and to cater for a reasonable volume of work arising after the ship's arrival for refit? (Normally a growth of 10% maximum on contract specification).

300 Elliott Ave. West
Seattle, WA 98119
206-281-3535
Telex: 160564 HALW SEA
FAX: 206-283-2687 or 206-281-7110

NWMAR131258

- c) Are agreements in force to allow overtime and shift work as may be required by the work content of the specification?
- d) Are facilities available to produce prompt quotations for work arising after the ship's arrival?
- e) Are there any known unresolved or outstanding industrial disputes or negotiations pending with your workforce? We hold you responsible for keeping us informed on such matters so we can consider the impact on our operation.
- f) Do you have an agreement with your workforce to allow ship's staff to perform maintenance and servicing in areas where there will be no interference with the main contract and which will not be detrimental to the ship's watertight integrity or overall safety?

The validity of any contract with you will be conditional on your acceptance that certain work items will be undertaken by subcontractors, service specialists etc. who will be contracted by ourselves.

In general any such subcontractor will be able to work independently without assistance from your shipyard. If any such assistance is required then an item will be added to the specifications.

A list of subcontractors will be submitted to you before arrival of the vessel. All subcontractors will be instructed to comply with the necessary safety precautions enforced at your yard.

During the repairs, ships officers, crew and subcontractors will live on board and close cooperation between interested parties will be essential to ensure acceptable living conditions.

The ship's home port at the present time is Vancouver B.C. where she will be docked every Saturday as of June 3rd. The ship would be available for inspection on those dates. Arrangements must be made through this office.

In drawing together your offer, you should bear in mind that "not quoted" items will be to your disadvantage and that we will be comparing the total cost of the operation including deviation voyages.

In order to get a fair comparison please ensure your quotation is presented in same form as our tender.

All quoted prices should be broken down into the following segments.

- A) Labor.
- B) Material.
- C) Port of Portland user fee.

Attendance of Dutch Coast Guard, American Coast Guard and classification surveyor will be arranged by ourselves.

Regards,


N. Hogendoorn
Director Technical Operations
HOLLAND AMERICA LINE - WESTOURS INC.

NH:ch
Enclosure



Holland America Line
Westours Inc.

May 18, 1990
ref. SVP#170-90

Northwest Marine Iron Works
Mr. Bill Zavin
5555 N. Channel Avenue
Portland, Oregon 97208

Dear Bill,

Enclosed for your records, please find a copy of the signed
"contract for repairs" between your company and Holland
America Line Westours Inc..

Regards,

Capt. A. Lingaas
Senior Vice President
Holland America Line Westours Inc.

AL:dk

CONTRACT FOR REPAIR
of a
COMMERCIAL PASSENGER VESSEL

AGREEMENT, dated this 10th day of May, 1990, between NORTHWEST MARINE, INC., an Oregon corporation ("NWM"), and HOLLAND AMERICA LINE-WESTOURS INC., a Washington corporation ("HALW"), with respect to certain repair work to be done by NWM on the ms NIEUW AMSTERDAM, a commercial passenger vessel of Netherlands Antilles registry (the "Vessel") that is owned by Holland America Tours N.V., a Netherlands Antilles corporation for which HALW acts as agent, and which is engaged in the transport of passengers throughout the world.

The parties, having agreed upon certain commercial ship repair work to be done on the Vessel by NWM, hereby covenant and agree as follows:

PART I. STATEMENT OF WORK.

(A) Work Description. NWM agrees to furnish the materials, parts, supplies, tools, facilities, components, drawings, utilities and labor to perform the work described on Exhibit A hereto, as such may be modified, increased or decreased by Change Order (the "Work"). Other than as to planning and other preliminary matters included in the Work, the Work shall be performed at NWM's drydock facilities in Portland, Oregon.

(B) Compliance With Requirements Applicable to Vessel. NWM shall be responsible for performing and completing the Work in accordance with the applicable requirements (if any) of all governmental and regulatory authorities having jurisdiction over the Vessel including, without limitation, the U.S. Coast Guard, the U.S. Public Health Service and the Classification Society for the Vessel. NWM shall further be responsible for insuring that, upon conclusion of the Work, the Vessel is not in violation of any such requirements as a direct consequence of the Work having been performed.

(C) Inspection of Work. HALW shall have the right to inspect the progress of the Work at all times. HALW's inspection of the Work, or its failure to inspect, shall not in any way alter or diminish the obligations of NWM hereunder.

(D) Shop Drawings. From time to time prior to and during the performance of the Work, NWM shall, at the reasonable request of HALW or upon its own initiative, prepare and furnish to HALW shop drawings with respect to those aspects of the Work where the preparation of shop drawings in advance of actual performance is

appropriate. HALW shall promptly review all shop drawings so provided and approve or disapprove same except that approval shall not be unreasonably withheld. Properly disapproved drawings shall be corrected. Approvals shall not relieve NWM of its warranty obligations provided in Section III(A) below.

(E) Work by HALW. HALW shall, for its own account, have the right to perform work on board the Vessel with ship's crew or called in specialists during the time that the Work is being performed. NWM shall have no liabilities or obligations regarding any such work so performed by or on behalf of HALW. Such work shall be undertaken in such manner as shall not interfere with the performance of the Work by NWM. If in the performance of such work HALW or such specialists shall be negligent or reckless and such shall result in the death of, personal injury to, or damage to the property of, a third party, HALW shall indemnify NWM and hold it harmless from and against any losses, damages, causes of action, liabilities and expenses suffered or incurred by NWM and which result from such death, injury or property damage. NWM shall promptly notify HALW of any claims or causes of action asserted or commenced in respect of which HALW has liability to NWM under the immediately preceding sentence whereupon HALW shall, on behalf of NWM, assume the defense thereof through legal counsel selected by HALW.

(F) Providing of Materials by HALW. To the extent specified on Exhibit A, HALW shall order and pay for directly certain materials, parts and supplies for use by NWM in the performance of the Work. Vendors, specifications and lead order times for all such items shall be as specified by NWM in order to insure that items received are what would have been received had NWM ordered them itself, and are received at the same times as if NWM had ordered them itself. Amounts due NWM under this Agreement are exclusive of the cost of such items.

(G) Quality of Materials etc. All materials, parts, supplies and components used by NWM for the Work shall be suitable for their intended purpose and: (i) of the quality specified in Exhibit A; or (ii) if no quality standard is specified, then of such quality as is consistent with good marine practice.

(H) Authorized Representatives. Each party shall by notice to the other party, from time to time, designate one or more Authorized Representatives who shall have authority to act on behalf of said party for all purposes of this Agreement. Other than the Authorized Representatives, no person shall have authority to obligate a party under this Agreement or relieve the other party of any of its obligations under this Agreement including, without limitation, the execution of Change Orders. Notwithstanding the foregoing provisions of this Section, as to HALW the only persons with authority to amend this Agreement, designate or change Authorized Representatives or execute Change Orders involving an addition to or reduction in amounts otherwise due NWM hereunder of more than \$50,000 shall be HALW's President

and HALW's Senior Vice President-Cruise Operations. Notwithstanding the foregoing provisions of this Section, as to NWM the only persons with authority to amend this Agreement, designate or change Authorized Representatives or execute Change Orders involving an addition to or reduction in amounts otherwise due NWM hereunder of more than \$50,000 shall be NWM's General Manager. The initial Authorized Representatives of NWM is the NWM General Manager. The initial Authorized Representative of HALW is Nanne Hogendoorn.

(I) Disposal of Items Removed From Vessel. Any materials, parts, components or other items removed from the Vessel in connection with the Work shall, if requested in advance by HALW, be turned over to HALW whereupon HALW shall be responsible for their proper disposal in accordance with the requirements of applicable law. As to all other materials, parts, components and other items removed from the Vessel in connection with the Work, NWM shall be responsible for their proper disposal in accordance with the requirements of applicable law.

(J) Change Orders. In the event that HALW requests any modification, deletion or addition to the Work (as then constituted), the parties shall execute a Change Order which shall specify:

1. the modification, deletion or addition to the Work to be effected pursuant thereto;
2. the increase or decrease in the price for the Work resulting therefrom, provided, however, if the parties are unable to agree on the amount of such increase or decrease, then the Change Order shall still be executed without reference to the change in Price and such Change Order shall be deemed a "Time and Materials Change Order" for purposes of the following provisions of this Agreement; and
3. the change, if any, in the date on which the Work is to be completed.

No such modification, deletion or addition to the Work shall become effective unless and until a Change Order in respect thereof shall have been properly executed. As to any Change Order that is a Time and Materials Change Order: (i) the labor charges shall be \$36.00/hour for straight time labor and \$55.00/hour for overtime labor; (ii) all materials and subcontracts to be charged at NWM's cost; and (iii) additional governmental taxes, assessments and Port of Portland user fees (exclusive of any employment related taxes) shall be passed through without mark-up.

(K) Time Schedule. HALW shall cause the Vessel to arrive at NWM's drydock facilities no later than 24.00 hrs. on May 13, 1990. Subject to Change Order, the Work shall be completed, and the Vessel shall be in a position to leave the drydock facilities, no

later than 05.00 hrs. on May 21, 1990, provided, however, NWM shall not be responsible for any delay resulting from any cause or causes beyond the reasonable control of NWM including, without limitation, Acts of God, war, riots, civil disturbances, labor strikes and priorities or allocations of any public entity having jurisdiction. For these purposes, matters impacting the performance of NWM's subcontractors or vendors shall not be considered beyond the reasonable control of NWM unless they were also beyond the reasonable control of said subcontractor or vendor. The parties shall use their best efforts to minimize the adverse impact of any such delay.

(L) Subcontractors/Vendors. Subcontractors and vendors to be utilized for major or critical areas of the Work shall be subject to the prior approval of HALW, which approval shall not be unreasonably withheld or delayed.

(M) Status of NWM's Employees/No Liens. Neither the employees of NWM nor of any of its subcontractors or vendors shall be considered Vessel crew. NWM shall be solely responsible for the immediate release and discharge of any and all liens that may attach to the Vessel that arise from or are otherwise attributable to the Work or the presence of the Vessel at NWM's facilities (other than liens created by HALW or its affiliates) including, without limitation, mechanics and materialmens liens arising from the work of NWM, the subcontractors and vendors of NWM and the employees of NWM, its subcontractors or vendors.

PART II. PRICE AND PAYMENT TERMS

(A) Amount. Identified on Exhibit A may be certain items of the Work as to which the parties have not reached agreement as to the price due to uncertainty regarding the amount of labor and materials actually required ("Time and Materials Work"). As to Time and Materials Work: (i) the labor charges shall be \$36.00/hour for straight time labor and \$55.00/hour for overtime labor; (ii) all materials and subcontracts to be charged at NWM's cost; and (iii) additional governmental taxes, assessments and Port of Portland user fees (exclusive of any employment related taxes) shall be passed through without mark-up. HALW agrees to pay the price set forth on Exhibit A plus amounts due for Time and Materials Work computed as above provided, as such may be adjusted by Change Order, in consideration for the Work. The price set forth on Exhibit A plus such amount for Time and Materials Work, as well as any change thereto agreed pursuant to a Change Order, includes all governmental taxes, assessments and user fees due and payable by HALW in connection with the Work including, without limitation, those imposed by the Port of Portland. NWM shall be responsible for the payment of all such taxes, assessments and user fees. Refunds of any such taxes, assessments or user fees realized by HALW or NWM shall be retained by or delivered to HALW, as the case may be, it being agreed that such refunds are the property of HALW.

(B) Terms. No discounts will be allowed.

(C) Progress Billings. NWM will deliver progress billings by telefax to HALW's Seattle office (206-286-3274; Attn: Cruise Operations) no later than 10:00 a.m. on every Friday during the period the Vessel is in drydock (or if Friday is not a business day, then on the immediately preceding business day) for 100% of the theretofore unbilled and completed portion of the Work. Progress billings shall contain sufficient detail so as to enable HALW to verify their accuracy. 95% of each progress billing shall be remitted to NWM by the close of the business on the immediately following Monday (or if Monday is not a business day, then on the immediately following business day), with the remaining 5% to be retained by HALW for payment together with the final billing payment as hereafter provided. Progress billings will only be made if the drydock period is in excess of ten (10) calendar days.

(D) Final Billing. Final billing for all completed Work not previously billed shall be effected as soon as practical after the completion of the Work. The final billing, together with amounts retained by HALW from progress billings, shall be paid by HALW within 15 calendar days of HALW's receipt of the final billing.

(E) Disputed Billings. In the event that HALW disputes any billing made as above provided and the parties are unable to resolve the dispute prior to the time at which payment is to be effected, HALW shall, if NWM shall so request, cause the amount in dispute to be deposited into an interest-bearing, federally insured commercial bank account in Seattle, Washington from which withdrawals may only be made upon the joint signature of HALW and NWM. Once the dispute has been resolved by the parties or by arbitration as hereafter provided, the amount at issue shall be paid from the account to HALW and/or NWM in accordance with the resolution with interest earned on the account to be allocated pro rata.

(F) Manner of Payment. HALW shall pay each billing by wire transferring the amount due to NWM's account at First Interstate Bank, Portland, Oregon, ABA No. 123000123 for credit to Account No. 552-0015229 in the name of NWM.

(G) Overtime Work. For purposes of determining amounts due in respect of Time and Materials Work and Time and Materials Change Orders, work shall be considered overtime work to the extent it is performed on Saturday, Sunday, a legal holiday (as defined by the collective bargaining agreement to which NWM is a party) or to the extent it is performed by workers who have already completed an 8-hour shift on a normal work day but then only to the extent it is performed following the conclusion of the 8-hour shift and during the same 24-hour period in which the 8-hour shift occurred.

PART III. LIMITED WARRANTY

(A) Terms of Limited Warranty. Subject to the provisions hereinafter set forth in this Part III, NWM agrees to remedy (whether by repair or replacement, as necessary), free of charge to HALW, any defects in the Vessel attributable to: (i) the workmanship of NWM under this Agreement; (ii) deficiencies in designs and/or drawings prepared by NWM in connection with the Work; or (iii) the failure of NWM to perform the Work in accordance with the requirements of this Agreement. NWM's liability under this Section III(A) shall extend only to defects discovered by HALW prior to the end of Guarantee Period (as hereafter defined) and in respect of which a timely Warranty Notice (as hereafter defined) is given to NWM.

(B) Guarantee Period. As used in this Agreement, the term "Guarantee Period" shall mean the 90-day period commencing on the day on which all Work is completed, provided, however, that as to any defect as to which a Warranty Notice is timely given during the 90-day period commencing on the day on which all Work is completed, the Guarantee Period shall extend until the end of the first 90-day continuous period during which the no further remedial work is required in respect of such defect. For all purposes of this Section 3(B), there shall be disregarded any days during which the Vessel is not available for service on account of defects which NWM is liable to make good as herein provided.

(C) Deficiency Notice. Claims by HALW against NWM under Section III(A) must be made by written notice from HALW to NWM given prior to the conclusion of the Guarantee Period (a "Warranty Notice"), each such notice to be sent by telefax to NWM at (503) 240-6600, Attn: General Manager.

(D) Remedy of Defects. The remedial obligations of NWM under Section III(A) shall be effected on board the Vessel (so long as such would not interfere with the normal operation or working schedule of the Vessel) or at such shipyard as is designated by NWM which shipyard must be one which would not unreasonably impair or delay the normal operation or working schedule of the Vessel and which is otherwise suitable for the purpose. In the event NWM fails to promptly designate a shipyard meeting the criteria above stated after being requested to do so by HALW, HALW may designate a shipyard suitable for the purpose by notice thereof to NWM. Where such would expedite repair work, NWM shall cause replacement parts to be promptly forwarded to the Vessel. NWM shall perform remedial work on a prompt basis giving due consideration to the severity and impact on HALW of the problem. HALW shall have the right to perform, or cause to be performed, at NWM's expense, the remedial work with HALW's personnel or utilizing third parties: (i) in emergency situations; (ii) in situations where NWM has failed to perform the work on a prompt basis; and (iii) in situations where NWM has agreed to permit such action by HALW. The time permitted NWM to effect the repair work before HALW shall have the right to effect the remedial work shall be determined

giving consideration to the seriousness of the defect and its impact on the operation and working schedule of the Vessel. Any parts or other items installed in connection with any remedial work shall be the property of HALW. All parts or other items removed in connection with any remedial work shall be the property of NWM.

(E) Limitation on Warranty Obligations. NWM shall have no obligation under Section III(A) for defects caused by: (i) normal wear and tear; or (ii) the failure of HALW to operate or maintain the Vessel in accordance with good marine practice.

(F) No Consequential Damages. HALW accepts the risk of, and NWM shall not be liable under Section III(A) for any, incidental, special or consequential damages of any nature whatsoever including, without limitation, claims related to delay or loss of use of the Vessel, lost revenues, lost profits, crew wages or shares, salvage or tug expenses, whether such damages be predicated upon an alleged breach of this Agreement, negligence by NWM, strict liability in tort or upon any other basis whatsoever, provided, however, if the damages are caused by any defect in the Vessel which NWM is liable for the remediation of as provided in Section III(A), then: (i) nothing contained in this Section shall be construed as relieving NWM of its obligation to pay incidental expenses directly related to the performance of such remedial work (such as, for example, drydock fees and tug expenses); and (ii) if the Vessel is required to be out of service as a direct consequence of the performance of such remedial work and, as a result, HALW is able to recoup all or part of its lost revenues under its passage money insurance policies, NWM shall reimburse HALW for the passage money insurance deductible.

(G) Warranties by Subcontractors. NWM's obligations under this Part III are not diminished or relieved by any provision or term of any warranty given by a vendor or subcontractor. If the terms of warranty or guaranty of any vendor or subcontractor are greater or more extensive in subject, time, remedy or any other term than those of NWM under this Part III: (i) NWM's responsibility shall extend to coincide with such warranty or guaranty to the extent such warranty or guaranty is honored by the vendor or subcontractor; and (ii) NWM shall, at HALW's expense, take all steps requested by HALW to obtain said fulfillment.

(H) Warranty of Title. NWM warrants that HALW or the affiliate of HALW that owns the Vessel shall have good and marketable title to each and every part, component or other item placed upon or made part of the Vessel as part of the Work, free and clear of all claims, liens, charges or encumbrances of any nature whatsoever other than those created by HALW or its affiliates.

(I) WARRANTY EXCLUSION. THE WARRANTIES SET FORTH IN THIS PART III ARE GIVEN IN LIEU OF ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY. THERE ARE NO WARRANTIES WHICH

EXTEND BEYOND THOSE EXPLICITLY SET FORTH IN THIS PART III. ANY WARRANTY, EXPRESS OR IMPLIED, THAT THE MATERIALS FURNISHED OR SOLD UNDER THIS AGREEMENT ARE MERCHANTABLE OR FIT FOR ANY PARTICULAR PURPOSE IS HEREBY DISCLAIMED.

PART IV. INSURANCE/POLLUTION MATTERS

(A) Maintenance of Insurance. During the period in which the Work is being performed and thereafter for the duration of the Guarantee Period, HALW shall, at its own expense, maintain and keep in force its customary insurance as to hull and machinery and protection and indemnity. HALW represents and warrants that, under the terms of such policies, coverage does not lapse as a consequence of the Vessel being out of service for the purpose of having the Work or any Part III remedial work performed.

(B) Pollution. HALW shall, during the period the Work is being performed, maintain in effect a Certificate of Financial Responsibility issued by the Federal Maritime Commission. Nothing contained herein shall, however, relieve either party of its liabilities and obligations in respect of environmental pollution resulting from its acts or omissions.

PART V. MISCELLANEOUS COVENANTS.

(A) Ballasting. If the Work contemplates that the Vessel will be hauled, HALW will cause her to be trimmed and ballasted as instructed by NWM.

(B) Safety Regulations. HALW shall familiarize itself and the Vessel's officers with NWM's safety and security regulations and shall cause the crew of the Vessel, and all persons having business with the Vessel, to comply with all NWM's security and/or safety regulations while within NWM's facility including, but not limited to, the use of personal protective gear.

(C) Invalidity. If any one or more of the provisions of this Agreement is found to be legally invalid, this Agreement shall be construed as if not containing such provision and the rights and obligations of the parties shall be construed and enforced accordingly.

(D) Integration and Modification. This Agreement contains the entire agreement of the parties regarding the subject matter hereof, and supersedes all prior discussion, negotiations, understandings, agreements, or representations with respect thereto. It shall not be changed, modified or altered in any way except by written instrument executed by the parties.

(E) Incorporation of Exhibits. Each of the Exhibits is hereby incorporated into and made a part of this Agreement.

(F) No Waiver. A waiver by either party of any right under this Agreement must be in writing and shall not be construed as a

waiver of any other right.

(G) Headings. Headings are for convenience only and do not form a part of this Agreement.

(H) No Third Party Beneficiary. This Agreement is intended solely for the benefit of the parties hereto and is not intended to benefit any third person or party.

(I) Right to Review Records. HALW shall, upon request, at all reasonable times (both during and following the conclusion of the Work) be provided with access to, and the right to reproduce, the records and materials supporting all time and materials charges of NWM under this Agreement together with records and materials relating to the payment by, or refunds to, NWM of taxes, assessments or user fees relating to this Agreement. For such period as HALW shall reasonably request, NWM shall provide on-site office facilities (including desks, telephones, fax and copying facilities and other similar facilities as HALW shall reasonably request) for two HALW accounting representatives who are assigned by HALW to monitor accounting aspects relating to the Work. The costs (telephone, copying etc.) incurred by such representatives shall be borne by HALW except that no rent shall be charged HALW for such facilities.

(J) No Improper Payments. Each party covenants and agrees not to offer or make any payment (in cash, in kind or otherwise) to any employee, officer or director of the other party or of any of its affiliates that could be construed as being a bribe or inducement to act or refrain from acting. If any such person shall solicit such a payment from NWM, NWM shall promptly notify the President of HALW by telefax, telefax No. (206) 284-8332. If any such person shall solicit such a payment from HALW, HALW shall promptly notify the General Manager of NWM by telefax, telefax No. (503) 240-6600.

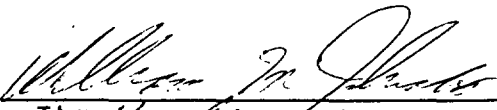
(K) Arbitration. All claims, disputes and controversies between the parties arising out of or relating to this Agreement or the breach thereof shall be decided by arbitration in accordance with the Commercial Arbitration Rules of the American Arbitration Association, subject to the limitations of this subsection. Either party may initiate arbitration proceedings by giving notice to the other of its intent to arbitrate within sixty (60) days after the claim, dispute or controversy has arisen. All said proceedings will be brought in Portland, Oregon. The claim or dispute shall be determined by a single arbitrator. In the event the parties are unable to agree on an arbitrator, the arbitrator shall be appointed by the American Arbitration Association under the Commercial Arbitration rules then in effect. The arbitrator shall determine the claim or dispute in accordance with (i) the language of this Agreement, (ii) the general maritime laws of the United States, and (iii) the laws of the State of Oregon. The award rendered by the arbitrator will be final. Judgment may be entered upon it in any court having jurisdiction


thereof, and will not be subject to modification or appeal. The prevailing party shall be entitled to recover its reasonable attorney's fees which may be set by the arbitrator in the same proceeding. The prevailing party shall also be entitled to recover all costs and fees paid for the arbitration.

IN WITNESS WHEREOF, the parties have executed this Agreement on the date set forth opposite their respective signatures.

Dated: May 10, 1990

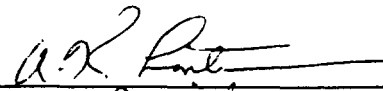
NORTHWEST MARINE, INC.

By 
Its Vice President

By 
Its Senior Vice President

Dated: May 10, 1990

HOLLAND AMERICA LINE-WESTOURS INC.

By 
Its President

Holland America Tours N.V. hereby acknowledges the authority of Holland America Line-Westours Inc. to act as its agent with respect to the above Contract For Repair of a Commercial Passenger Vessel.

HOLLAND AMERICA TOURS N.V.

By 
A. Kirk Lanterman, Proxyholder

90-D/DRYDOCK
5/10/90

DRAFT: April 23, 1990

CONTRACT FOR REPAIR

of a

COMMERCIAL PASSENGER VESSEL

X AGREEMENT, dated this ____ day of _____, 1990,
X between NORTHWEST MARINE, INC., an Oregon corporation ("NWM"), and
HOLLAND AMERICA LINE-WESTOURS INC., a Washington corporation
("HALW"), with respect to certain repair work to be done by NWM on
the ms NIEUW AMSTERDAM, a commercial passenger vessel of
Netherlands Antilles registry (the "Vessel") that is owned by
Holland America Tours N.V., a Netherlands Antilles corporation for
which HALW acts as agent, and which is engaged in the transport of
passengers throughout the world.

The parties, having agreed upon certain commercial ship repair
work to be done on the Vessel by NWM, hereby covenant and agree as
follows:

PART I. STATEMENT OF WORK.

(A) Work Description. NWM agrees to furnish the materials,
parts, supplies, tools, facilities, components, drawings,
utilities and labor to perform the work described on Exhibit A
hereto, as such may be modified, increased or decreased by Change
Order (the "Work"). Other than as to planning and other
preliminary matters included in the Work, the Work shall be
performed at NWM's drydock facilities in Portland, Oregon.

(B) Compliance With Requirements Applicable to Vessel. NWM
shall be responsible for performing and completing the Work in
accordance with the applicable requirements (if any) of all
governmental and regulatory authorities having jurisdiction over
the Vessel including, without limitation, the U.S. Coast Guard,
the U.S. Public Health Service and the Classification Society for
the Vessel. NWM shall further be responsible for insuring that,
upon conclusion of the Work, the Vessel is not in violation of any
such requirements as a direct consequence of the Work having been
performed.

(C) Inspection of Work. HALW shall have the right to inspect
the progress of the Work at all times. HALW's inspection of the
Work, or its failure to inspect, shall not in any way alter or
diminish the obligations of NWM hereunder.

(D) Shop Drawings. From time to time prior to and during the
performance of the Work, NWM shall, at the reasonable request of
HALW or upon its own initiative, prepare and furnish to HALW shop
drawings with respect to those aspects of the Work where the
preparation of shop drawings in advance of actual performance is

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appropriate. HALW shall promptly review all shop drawings so provided and approve or disapprove same except that approval shall not be unreasonably withheld. Properly disapproved drawings shall be corrected. Approvals shall not relieve NWM of its warranty obligations provided in Section III(A) below.

(E) Work by HALW. HALW shall, for its own account, have the right to perform work on board the Vessel with ship's crew or called in specialists during the time that the Work is being performed. NWM shall have no liabilities or obligations regarding any such work so performed by or on behalf of HALW. Such work shall be undertaken in such manner as shall not interfere with the performance of the Work by NWM. If in the performance of such work HALW or such specialists shall be negligent or reckless and such shall result in the death of, personal injury to, or damage to the property of, a third party, HALW shall indemnify NWM and hold it harmless from and against any losses, damages, causes of action, liabilities and expenses suffered or incurred by NWM and which result from such death, injury or property damage. NWM shall promptly notify HALW of any claims or causes of action asserted or commenced in respect of which HALW has liability to NWM under the immediately preceding sentence whereupon HALW shall, on behalf of NWM, assume the defense thereof through legal counsel selected by HALW.

(F) Providing of Materials by HALW. To the extent specified on Exhibit A, HALW shall order and pay for directly certain materials, parts and supplies for use by NWM in the performance of the Work. Vendors, specifications and lead order times for all such items shall be as specified by NWM in order to insure that items received are what would have been received had NWM ordered them itself, and are received at the same times as if NWM had ordered them itself. Amounts due NWM under this Agreement are exclusive of the cost of such items.

(G) Quality of Materials etc. All materials, parts, supplies and components used by NWM for the Work shall be suitable for their intended purpose and: (i) of the quality specified in Exhibit A; or (ii) if no quality standard is specified, then of such quality as is consistent with good marine practice.

(H) Authorized Representatives. Each party shall by notice to the other party, from time to time, designate one or more Authorized Representatives who shall have authority to act on behalf of said party for all purposes of this Agreement. Other than the Authorized Representatives, no person shall have authority to obligate a party under this Agreement or relieve the other party of any of its obligations under this Agreement including, without limitation, the execution of Change Orders. Notwithstanding the foregoing provisions of this Section, as to HALW the only persons with authority to amend this Agreement, designate or change Authorized Representatives or execute Change Orders involving an addition to or reduction in amounts otherwise due NWM hereunder of more than \$50,000 shall be HALW's President

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X
X
A
and HALW's Senior Vice President-Cruise Operations. Notwithstanding the foregoing provisions of this Section, as to NWM the only persons with authority to amend this Agreement, designate or change Authorized Representatives or execute Change Orders involving an addition to or reduction in amounts otherwise due NWM hereunder of more than \$50,000 shall be NWM's General Manager. The initial Authorized Representatives of NWM is the NWM General Manager. The initial Authorized Representatives of HALW are: _____.

(I) Disposal of Items Removed From Vessel. Any materials, parts, components or other items removed from the Vessel in connection with the Work shall, if requested in advance by HALW, be turned over to HALW whereupon HALW shall be responsible for their proper disposal in accordance with the requirements of applicable law. As to all other materials, parts, components and other items removed from the Vessel in connection with the Work, NWM shall be responsible for their proper disposal in accordance with the requirements of applicable law.

(J) Change Orders. In the event that HALW requests any modification, deletion or addition to the Work (as then constituted), the parties shall execute a Change Order which shall specify:

1. the modification, deletion or addition to the Work to be effected pursuant thereto;
2. the increase or decrease in the price for the Work resulting therefrom, provided, however, if the parties are unable to agree on the amount of such increase or decrease, then the Change Order shall still be executed without reference to the change in Price and such Change Order shall be deemed a "Time and Materials Change Order" for purposes of the following provisions of this Agreement; and
3. the change, if any, in the date on which the Work is to be completed.

No such modification, deletion or addition to the Work shall become effective unless and until a Change Order in respect thereof shall have been properly executed. As to any Change Order that is a Time and Materials Change Order: (i) the labor charges shall be \$____.00/hour for straight time labor and \$____.00 for overtime labor; (ii) all materials and subcontracts to be charged at NWM's cost plus ____%; and (iii) additional governmental taxes, assessments and Port of Portland user fees (exclusive of any employment related taxes) shall be passed through without mark-up.

(K) Time Schedule. HALW shall cause the Vessel to arrive at NWM's drydock facilities no later than _____.m. on _____, 199__. Subject to Change Order, the Work shall be completed, and the Vessel shall be in a position to leave the drydock facilities,

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no later than .m. on , 199 , provided, however, NWM shall not be responsible for any delay resulting from any cause or causes beyond the reasonable control of NWM including, without limitation, Acts of God, war, riots, civil disturbances, labor strikes and priorities or allocations of any public entity having jurisdiction. For these purposes, matters impacting the performance of NWM's subcontractors or vendors shall not be considered beyond the reasonable control of NWM unless they were also beyond the reasonable control of said subcontractor or vendor. The parties shall use their best efforts to minimize the adverse impact of any such delay.

(L) Subcontractors/Vendors. Subcontractors and vendors to be utilized for major or critical areas of the Work shall be subject to the prior approval of HALW, which approval shall not be unreasonably withheld or delayed.

(M) Status of NWM's Employees/No Liens. Neither the employees of NWM nor of any of its subcontractors or vendors shall be considered Vessel crew. NWM shall be solely responsible for the immediate release and discharge of any and all liens that may attach to the Vessel that arise from or are otherwise attributable to the Work or the presence of the Vessel at NWM's facilities (other than liens created by HALW or its affiliates) including, without limitation, mechanics and materialmen's liens arising from the work of NWM, the subcontractors and vendors of NWM and the employees of NWM, its subcontractors or vendors.

PART II. PRICE AND PAYMENT TERMS

(A) Amount. Identified on Exhibit A are certain items of the Work as to which the parties have not reached agreement as to the price due to uncertainty regarding the amount of labor and materials actually required ("Time and Materials Work"). As to Time and Materials Work: (i) the labor charges shall be \$.00/hour for straight time labor and \$.00 for overtime labor; (ii) all materials and subcontracts to be charged at NWM's cost plus %; and (iii) additional governmental taxes, assessments and Port of Portland user fees (exclusive of any employment related taxes) shall be passed through without mark-up. HALW agrees to pay the price set forth on Exhibit B plus amounts due for Time and Materials Work computed as above provided, as such may be adjusted by Change Order, in consideration for the Work. The price set forth on Exhibit B plus such amount for Time and Materials Work, as well as any change thereto agreed pursuant to a Change Order, includes all governmental taxes, assessments and user fees due and payable by HALW in connection with the Work including, without limitation, those imposed by the Port of Portland. NWM shall be responsible for the payment of all such taxes, assessments and user fees. Refunds of any such taxes, assessments or user fees realized by HALW or NWM shall be retained by or delivered to HALW, as the case may be, it being agreed that such refunds are the property of HALW.

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(B) Terms. No discounts will be allowed.

X (C) Progress Billings. NWM will deliver progress billings by telefax to HALW's Seattle office (206-284-8332; Attn: Cruise Accounting) no later than 10:00 a.m. on every Friday during the period the Vessel is in drydock (or if Friday is not a business day, then on the immediately preceding business day) for 100% of the theretofore unbilled and completed portion of the Work. Progress billings shall contain sufficient detail so as to enable HALW to verify their accuracy. 95% of each progress billing shall be remitted to NWM by the close of the business on the immediately following Monday (or if Monday is not a business day, then on the immediately following business day), with the remaining 5% to be retained by HALW for payment together with the final billing payment as hereafter provided.

(D) Final Billing. Final billing for all completed Work not previously billed shall be effected as soon as practical after the completion of the Work. The final billing, together with amounts retained by HALW from progress billings, shall be paid by HALW within 15 calendar days of HALW's receipt of the final billing.

(E) Disputed Billings. In the event that HALW disputes any billing made as above provided and the parties are unable to resolve the dispute prior to the time at which payment is to be effected, HALW shall, if NWM shall so request, cause the amount in dispute to be deposited into an interest-bearing, federally insured commercial bank account in Seattle, Washington from which withdrawals may only be made upon the joint signature of HALW and NWM. Once the dispute has been resolved by the parties or by arbitration as hereafter provided, the amount at issue shall be paid from the account to HALW and/or NWM in accordance with the resolution with interest earned on the account to be allocated pro rata.

(F) Manner of Payment. HALW shall pay each billing by wire transferring the amount due to NWM's account at First Interstate Bank, Portland, Oregon, ABA No. 123000123 for credit to Account No. 552-0015229 in the name of NWM.

PART III. LIMITED WARRANTY

(A) Terms of Limited Warranty. Subject to the provisions hereinafter set forth in this Part III, NWM agrees to remedy (whether by repair or replacement, as necessary), free of charge to HALW, any defects in the Vessel attributable to: (i) the workmanship of NWM under this Agreement; (ii) deficiencies in designs and/or drawings prepared by NWM in connection with the Work; or (iii) the failure of NWM to perform the Work in accordance with the requirements of this Agreement. NWM's liability under this Section III(A) shall extend only to defects discovered by HALW prior to the end of Guarantee Period (as hereafter defined) and in respect of which a timely Warranty Notice (as hereafter defined) is given to NWM.

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x (B) Guarantee Period. As used in this Agreement, the term
x "Guarantee Period" shall mean the 90-day period commencing on the
x day on which all Work is completed, provided, however, that as to
x any defect as to which a Warranty Notice is timely given during
x the 90-day period commencing on the day on which all Work is
completed, the Guarantee Period shall extend until the end of the
first 90-day continuous period during which the no further
remedial work is required in respect of such defect. For all
purposes of this Section 3(B), there shall be disregarded any days
during which the Vessel is not available for service on account of
defects which NWM is liable to make good as herein provided.

(C) Deficiency Notice. Claims by HALW against NWM under
Section III(A) must be made by written notice from HALW to NWM
given prior to the conclusion of the Guarantee Period (a "Warranty
Notice"), each such notice to be sent by telefax to NWM at (503)
240-6600, Attn: General Manager.

(D) Remedy of Defects. The remedial obligations of NWM under
Section III(A) shall be effected on board the Vessel (so long as
such would not interfere with the normal operation or working
schedule of the Vessel) or at such shipyard as is designated by
NWM which shipyard must be one which would not unreasonably impair
or delay the normal operation or working schedule of the Vessel
and which is otherwise suitable for the purpose. In the event NWM
fails to promptly designate a shipyard meeting the criteria above
stated after being requested to do so by HALW, HALW may designate
a shipyard suitable for the purpose by notice thereof to NWM.
Where such would expedite repair work, NWM shall cause replacement
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severity and impact on HALW of the problem. HALW shall have the
right to perform, or cause to be performed, at NWM's expense, the
remedial work with HALW's personnel or utilizing third parties:
(i) in emergency situations; (ii) in situations where NWM has
failed to perform the work on a prompt basis; and (iii) in
situations where NWM has agreed to permit such action by HALW.
The time permitted NWM to effect the repair work before HALW shall
have the right to effect the remedial work shall be determined
giving consideration to the seriousness of the defect and its
impact on the operation and working schedule of the Vessel. Any
parts or other items installed in connection with any remedial
work shall be the property of HALW. All parts or other items
removed in connection with any remedial work shall be the property
of NWM.

(E) Limitation on Warranty Obligations. NWM shall have no
obligation under Section III(A) for defects caused by: (i) normal
wear and tear; or (ii) the failure of HALW to operate or maintain
the Vessel in accordance with good marine practice.

(F) No Consequential Damages. HALW accepts the risk of, and
NWM shall not be liable under Section III(A) for any, incidental,

DRAFT: April 23, 1990

special or consequential damages of any nature whatsoever including, without limitation, claims related to delay or loss of use of the Vessel, lost revenues, lost profits, crew wages or shares, salvage or tug expenses, whether such damages be predicated upon an alleged breach of this Agreement, negligence by NWM, strict liability in tort or upon any other basis whatsoever, provided, however, if the damages are caused by any defect in the Vessel which NWM is liable for the remediation of as provided in Section III(A), then: (i) nothing contained in this Section shall be construed as relieving NWM of its obligation to pay incidental expenses directly related to the performance of such remedial work (such as, for example, drydock fees and tug expenses); and (ii) if the Vessel is required to be out of service as a direct consequence of the performance of such remedial work and, as a result, HALW is able to recoup all or part of its lost revenues under its passage money insurance policies, NWM shall reimburse HALW for the passage money insurance deductible.

(G) Warranties by Subcontractors. NWM's obligations under this Part III are not diminished or relieved by any provision or term of any warranty given by a vendor or subcontractor. If the terms of warranty or guaranty of any vendor or subcontractor are greater or more extensive in subject, time, remedy or any other term than those of NWM under this Part III: (i) NWM's responsibility shall extend to coincide with such warranty or guaranty to the extent such warranty or guaranty is honored by the vendor or subcontractor; and (ii) NWM shall, at HALW's expense, take all steps requested by HALW to obtain said fulfillment.

(H) Warranty of Title. NWM warrants that HALW or the affiliate of HALW that owns the Vessel shall have good and marketable title to each and every part, component or other item placed upon or made part of the Vessel as part of the Work, free and clear of all claims, liens, charges or encumbrances of any nature whatsoever other than those created by HALW or its affiliates.

(I) WARRANTY EXCLUSION. THE WARRANTIES SET FORTH IN THIS PART III ARE GIVEN IN LIEU OF ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY. THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THOSE EXPLICITLY SET FORTH IN THIS PART III. ANY WARRANTY, EXPRESS OR IMPLIED, THAT THE MATERIALS FURNISHED OR SOLD UNDER THIS AGREEMENT ARE MERCHANTABLE OR FIT FOR ANY PARTICULAR PURPOSE IS HEREBY DISCLAIMED.

PART IV. INSURANCE/POLLUTION MATTERS

(A) Maintenance of Insurance. During the period in which the Work is being performed and thereafter for the duration of the Guarantee Period, HALW shall, at its own expense, maintain and keep in force its customary insurance as to hull and machinery and protection and indemnity. HALW represents and warrants that, under the terms of such policies, coverage does not lapse as a consequence of the Vessel being out of service for the purpose of

DRAFT: April 23, 1990

having the Work or any Part III remedial work performed.

(B) Pollution. HALW shall, during the period the Work is being performed, maintain in effect a Certificate of Financial Responsibility issued by the Federal Maritime Commission. Nothing contained herein shall, however, relieve either party of its liabilities and obligations in respect of environmental pollution resulting from its acts or omissions.

PART V. MISCELLANEOUS COVENANTS.

(A) Ballasting. If the Work contemplates that the Vessel will be hauled, HALW will cause her to be trimmed and ballasted as instructed by NWM.

(B) Safety Regulations. HALW shall familiarize itself and the Vessel's officers with NWM's safety and security regulations and shall cause the crew of the Vessel, and all persons having business with the Vessel, to comply with all NWM's security and/or safety regulations while within NWM's facility including, but not limited to, the use of personal protective gear.

(C) Invalidity. If any one or more of the provisions of this Agreement is found to be legally invalid, this Agreement shall be construed as if not containing such provision and the rights and obligations of the parties shall be construed and enforced accordingly.

(D) Integration and Modification. This Agreement contains the entire agreement of the parties regarding the subject matter hereof, and supersedes all prior discussion, negotiations, understandings, agreements, or representations with respect thereto. It shall not be changed, modified or altered in any way except by written instrument executed by the parties.

(E) Incorporation of Exhibits. Each of the Exhibits is hereby incorporated into and made a part of this Agreement.

(F) No Waiver. A waiver by either party of any right under this Agreement must be in writing and shall not be construed as a waiver of any other right.

(G) Headings. Headings are for convenience only and do not form a part of this Agreement.

(H) No Third Party Beneficiary. This Agreement is intended solely for the benefit of the parties hereto and is not intended to benefit any third person or party.

(I) Right to Review Records. HALW shall, upon request, at all reasonable times (both during and following the conclusion of the Work) be provided with access to, and the right to reproduce, the records and materials supporting all time and materials charges of NWM under this Agreement together with records and

DRAFT: April 23, 1990

~~materials relating to the payment by, or refunds to, NWM of taxes, assessments or user fees relating to this Agreement.~~ For such period as HALW shall reasonably request, NWM shall provide on-site office facilities (including desks, telephones, fax and copying facilities and other similar facilities as HALW shall reasonably request) for two HALW accounting representatives who are assigned by HALW to monitor accounting aspects relating to the Work. The costs (telephone, copying etc.) incurred by such representatives shall be borne by HALW except that no rent shall be charged HALW for such facilities.

(J) No Improper Payments. Each party covenants and agrees not to offer or make any payment (in cash, in kind or otherwise) to any employee, officer or director of the other party or of any of its affiliates that could be construed as being a bribe or inducement to act or refrain from acting. If any such person shall solicit such a payment from NWM, NWM shall promptly notify the President of HALW by telefax, telefax No. (206) 284-8332. If any such person shall solicit such a payment from HALW, HALW shall promptly notify the General Manager of NWM by telefax, telefax No. (503) 240-6600.

(K) Arbitration. All claims, disputes and controversies between the parties arising out of or relating to this Agreement or the breach thereof shall be decided by arbitration in accordance with the Commercial Arbitration Rules of the American Arbitration Association, subject to the limitations of this subsection. Either party may initiate arbitration proceedings by giving notice to the other of its intent to arbitrate within sixty (60) days after the claim, dispute or controversy has arisen. All said proceedings will be brought in Portland, Oregon. The claim or dispute shall be determined by a single arbitrator. In the event the parties are unable to agree on an arbitrator, the arbitrator shall be appointed by the American Arbitration Association under the Commercial Arbitration rules then in effect. The arbitrator shall determine the claim or dispute in accordance with (i) the language of this Agreement, (ii) the general maritime laws of the United States, and (iii) the laws of the State of Oregon. The award rendered by the arbitrator will be final. Judgment may be entered upon it in any court having jurisdiction thereof, and will not be subject to modification or appeal. The prevailing party shall be entitled to recover its reasonable attorney's fees which may be set by the arbitrator in the same proceeding. The prevailing party shall also be entitled to recover all costs and fees paid for the arbitration.

DRAFT: April 23, 1990

IN WITNESS WHEREOF, the parties have executed this Agreement on the date set forth opposite their respective signatures.

Dated: _____, 1990 NORTHWEST MARINE, INC.

By _____
Its _____

By _____
Its _____

Dated: _____, 1990 HOLLAND AMERICA LINE-WESTOURS INC.

By _____
Its _____

Holland America Tours N.V. hereby acknowledges the authority of Holland America Line-Westours Inc. to act as its agent with respect to the above Contract For Repair of a Commercial Passenger Vessel.

HOLLAND AMERICA TOURS N.V.

By _____
A. Kirk Lanterman, Proxyholder

90-D/DRYDOCK



Holland America Line
Westours Inc.

HAL

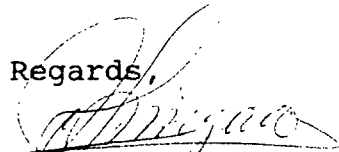
March 30, 1990
ref. SVP#114-90

Northwest Marine Iron Works
Mr. Bill Zavin
5555 N. Channel Avenue
Portland, Oregon 97217

Dear Bill:

Enclosed for your review, please find a draft of the drydock contract. Please provide me with your comments at your earliest convenience.

Regards,


Capt. A. Lingaas
Senior Vice President
Cruise Operations
HOLLAND AMERICA LINE WESTOURS INC.

AL:dk
Enclosure

300 Elliott Ave. West
Seattle, WA 98119
206-281-3535
Telex: 160564 HALW SEA
FAX: 206-283-2687 or 206-281-7110

NWMAR131282



Holland America Line
Westours Inc.

March 30, 1990

VIA TELECOPY
619-239-1751

Writer's Direct Fax
206-284-8332

Mr. Lloyd Schwartz
Southwest Marine, Inc.
PO Box 13308
San Diego, CA 92113

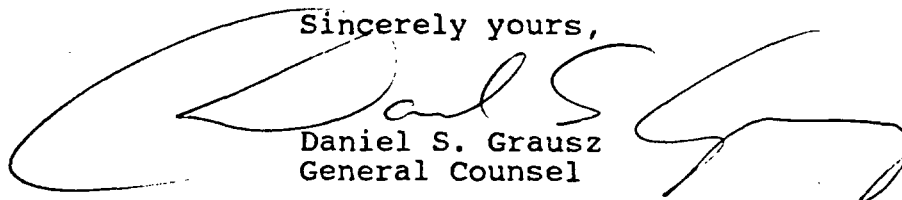
Re: Drydock Contract

Dear Lloyd:

I have attempted to draft a form of drydock contract that I believe is fair to all parties concerned. I need to tell you, however, that we are still discussing this contract with our insurers. They have raised some questions which we need to address next week. In the meantime, I wanted to give you an opportunity to begin reviewing this to see what direction we should head.

Please call me once you have had an opportunity to look this over.

Sincerely yours,



Daniel S. Grausz
General Counsel

DSG/scl
encs.

cc: Arvid Lingaas
Larry Calkins

300 Elliott Ave. West
Seattle, WA 98119
206-281-3535
Telex: 160564 HALW SEA
FAX: 206-283-2687 or 206-281-7110

NWMAR131283

RIDER TO VESSEL REPAIR CONTRACT
DATED FEBRUARY 15, 1990 BETWEEN
NORTHWEST MARINE, INC.
AND HOLLAND AMERICA, INC.

This Rider is incorporated in and made part of that certain Vessel Repair Contract (the "Agreement") dated February 15, 1990 between Northwest Marine, Inc., an Oregon corporation and Holland America, Inc. To the extent the contents of this Rider may conflict with any provision of the Agreement, the contents of this Rider shall take precedence and control.

A. Notwithstanding the provisions of paragraph 2 of the Agreement, it is the intent of the parties that all work defined in the basic work package for the vessel shall be performed for a agreed upon lump sum firm fixed price. This price shall be negotiated between the parties and shall include all costs of performing the work both prior to and during the yard period in the contractor's facility and shall be inclusive of all costs associated with planning and developing the work scope prior to the vessel's delivery to the contractor's facility. These costs shall include, but are not necessary limited to:

- Costs of survey specification and work package development
- Craft and supervisory labor
- Contractor furnished materials
- Contractor furnished sub-contractors
- Contractor furnished technical representatives
- Out of pocket facility and port costs
- Insurance
- Overhead
- General and administrative expenses
- Profit

Should the parties be unable to negotiate a sum certain for the lump sum firm fixed price for the basic contract work the parties will proceed as in paragraph B, Extra Work.

B. Paragraph 6 is deleted in its entirety and the following substituted therefor:

"EXTRA WORK. In the event Owner requests any modification, deletion or addition to the Work described in the Quotation, at the time the extra Work is requested or as soon thereafter as practical, the parties shall execute a Change Order to this Agreement setting forth a description of the extra Work. Owner hereby designates and appoints _____ and _____ as its sole authorized agents for purposes of execution of Change Orders."

Notwithstanding the provisions of paragraph 2 of the agreement, all new or changed work on the vessel shall be performed on a time and material basis. All labor hours shall be invoiced at the rate of \$38.00 per hour. All overtime hours used will carry a \$20.00 per hour premium time charge. All contractor supplied parts, materials, sub-contractor services and all out of pocket facility costs shall be invoiced at contractor's actual cost plus 15%. Any of the contractor's management staff dedicated solely to the work to be performed on the vessel shall properly be included as labor necessary to accomplish the work and shall be invoiced at the above hourly rates.

C. The last two sentences of paragraph 4 shall be deleted in their entirety and the following substituted therefor:

"All corrective work claimed by the Owner to be covered by the limited warranty set forth in paragraph 3 shall be undertaken at the location of Contractor's shipyard or at such other location as agreed upon by the parties."

D. Notwithstanding the provisions of paragraph 5, Contractor shall invoice Owner on Friday of each week for the value of the work performed during such week less 5%, which progress billing shall be paid by close of business on the following Monday via wire transfer to Contractor's account No.552-0015229 at First Interstate Bank, whose ABA # is 123000123. Any balance due Contractor on completion of the Work shall be paid not later than 15 days following Contractor's presentment of its final invoice. During the course of the Work Owner's designated representative(s) shall be allowed access to and a reasonable opportunity to review such records and documents as Contractor maintains so as to verify all of Contractor's labor hours expended in connection with the extra work and its cost of parts, materials, subcontractor services and Port of Portland Shipyard fees as incurred.

E. At all times while Work is being performed on the Vessel Contractor shall maintain in full force and effect a policy of Ship Repairers Legal Liability insurance with combined single limits of liability of not less than \$10,000,00. Owner shall be supplied with a certificate evidencing such coverage prior to the commencement of any Work on the Vessel by Contractor. Said policy of insurance shall not be canceled or modified unless Owner is given 10 days prior written notice of such occurrence.

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519-90
TAMPA
2-24-90
Law
Gunn

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Deals - Store



February 1, 1990

Captain Arvid Lingaas
Executive Vice President
Holland America Lines
300 Elliot Way West
Seattle, WA 98119

Dear Arvid:

Enclosed is our standard form contract and the Rider to it which our attorney has developed to suit the particular aspects of the agreement we discussed.

Please review at your convenience and feel free to call either Bill Johnston or myself as questions arise during your review.

We look forward to your comments and bringing these discussions to a fruitful conclusion.

Yours very truly,

A handwritten signature in cursive script, appearing to read 'Bill', is written over the typed name.

William H. Zavin, II
Senior Vice President
Commercial Contracting Activities

cc: Art Engel
Bill Johnston
Lloyd Schwartz
Nick Calley



NORTHWEST MARINE IRON WORKS

MAILING ADDRESS: P.O. BOX 3109
PORTLAND, OR 97208
5555 N. CHANNEL AVE., BLDG. 2
PORTLAND, OREGON 97217
PHONE: (503) 285-7557
TWX: 910-464-6107 NORMARINE PTL

FOR IMMEDIATE RELEASE

PORTLAND, OR -- Northwest Marine Iron Works and Holland America Lines jointly announced today plans for a \$10 million major refurbishing and renovation this fall of the SS Rotterdam, the cruise line's flagship.

Holland-America's J. Lievisse Adriaanse, Vice President-Technical Department, and William Zavín, Senior Vice President of Southwest Marine, Inc., Northwest Marine's parent company, said the refurbishing will be done in less than one month's time. "We have 28 calendar days to complete the project," Zavín said, "and we will be working around the clock to achieve that objective." Work will begin September 9 and must be completed by October 7, so the ship will be ready for the Caribbean cruise season. More than 1000 jobs will be created by the undertaking, Zavín reported.

The work is scheduled to be done during the 762-foot Rotterdam's normally scheduled drydocking at Northwest Marine, and coincides with the 30th anniversary of the vessel's maiden voyage, according to Nicholas G. Calley, Northwest's Manager of Cruise Marketing, who will supervise the refurbishing.

Zavín said "this upgrade will mark the largest project Northwest Marine has ever done on a cruise ship. We've been doing this kind of work since 1979 -- and on more than 20 ships -- but never on a scale as large as this and in such a short time frame."

He added that the company does a great deal of renovation and maintenance on other types of ships, but the time line is much longer.

"Work will go on 24 hours a day, and the end result will demonstrate the skills and talents of the unequalled workforce at Northwest Marine to handle projects of this type," he added.

Renovations on the 38,645 gross-ton Rotterdam will run the full gamut from re-upholstering furniture to replacing bedspreads and curtains to changing carpets to expanding the casino.

Technical improvements will include replacement and upgrading of the ship's telephone system; upgrading of the public address system; installation of a bow thruster; overhaul of the stabilizers; replacement of the film projectors in the ship's theater; and the repair of teak decking on the Upper Promenade, Sun and Bridge decks.

Also scheduled is the installation of a new air conditioning system, the addition of new washing machines, and the conversion of the Number 3 Hold Trunk to six additional cabins. All this is in addition to normal drydocking and an underwater survey and repairs, Calley explained.

-more-

Northwest Marine/Rotterdam, Page 2

"There will be very few of the ship's amenities that will not receive attention," Calley reported. "Even the tile work on the swimming pool will be replaced, and in 99 cabins upper/lower berths will be replaced with double beds."

The last drydock event on the Rotterdam was in 1987, but it was not nearly to the extent of the 1989 project, according to Calley.

After the work is completed, the ship will depart Portland October 10 for a three-day cruise to Vancouver, B.C., at which time testing and observation of work just completed will take place. After returning October 13 from Vancouver, the ship will immediately return to that Canadian city to prepare for an October 14 departure on a trans-Panama Canal cruise to Fort Lauderdale, Florida and the start of the Caribbean cruising season.

-30-

For further information contact: Bill Zavin or Nicholas Calley
(503) 285-7557

SENT BY:RIEDELRESOURCES

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NORTHWEST MARINE IRON WORKS

FOR IMMEDIATE RELEASE

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Parent Company, ~~President of Northwest~~
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Zavín said "this upgrade will mark the largest project Northwest Marine has ever done on a cruise ship. We've been doing this kind of work since 1979 -- and on more than 20 ships -- but never on a scale as large as this and in such a short time frame."

He added that the company does a great deal of renovation and maintenance on other types of ships, but the time line is

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NWMAR131296

Northwest Marine/Rotterdam, Page 2

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"Work will go on 24 hours a day, and the end result will demonstrate the skills and talents of the unequalled workforce at Northwest Marine to handle projects of this type," he added.

Renovations on the 38,645 gross-ton Rotterdam will run the full gamut from re-upholstering furniture to replacing bedspreads and curtains to changing carpets to expanding the casino.

Technical improvements will include replacement and upgrading of the ship's telephone system; upgrading of the public address system; installation of a bow thruster; overhaul of the stabilizers; replacement of the film projectors in the ship's theater; and the repair of teak decking on the Upper Promenade, Sun and Bridge decks.

Also scheduled is the installation of a new air conditioning system, the addition of new washing machines, and the conversion of the Number 3 Hold Trunk to six additional cabins. All this is in addition to normal drydocking and an underwater survey and repairs, Calley explained.

"There will be very few of the ship's amenities that will not receive attention," Calley reported. "Even the tilework on the swimming pool will be replaced, and in 99 cabins upper/lower berths will be replaced with double beds."

The last drydock event on the Rotterdam was in 1987, but it was not nearly to the extent of the 1989 project, according to Calley.

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Northwest Marine/Rotterdam, Page 3

After the work is completed, the ship will depart Portland October 10 for a three-day cruise to Vancouver, B.C., at which time testing and observation of work just completed will take place. After returning October 13 from Vancouver, the ship will immediately return to that Canadian city to prepare for an October 14 departure on a trans-Panama Canal cruise to Fort Lauderdale, Florida and the start of the Caribbean cruising season.

-30-

For further information contact: Bill Zavín or Nicholas Calley
(503)285-7557 or
Jack McIsaac (503)285-9111



NORTHWEST MARINE IRON WORKS

FOR IMMEDIATE RELEASE

MAILING ADDRESS: P.O. BOX 3109
PORTLAND, OR 97208
5555 N. CHANNEL AVE., BLDG. 2
PORTLAND, OREGON 97217
PHONE: (503) 285-7557
TWX: 910-464-6107 NORMARINE PTL

PORTLAND, OR -- Northwest Marine Iron Works and Holland America Lines jointly announced today plans for a \$10 million major refurbishing and renovation this fall of the SS Rotterdam, the cruise line's flagship.

Holland-America's J. Lievisse Adriaanse, Vice President-Technical Department, and William Zavín, President of Northwest Marine, said the refurbishing will be done in less than one month's time. "We have 28 calendar days to complete the project," Zavín said, "and we will be working around the clock to achieve that objective." Work will begin September 9 and must be completed by October 7, so the ship will be ready for the Caribbean cruise season. More than 1000 jobs will be created by the undertaking, Zavín reported.

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Northwest Marine/Rotterdam, Page 2

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Northwest Marine/Rotterdam, Page 3

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-30-

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(503)285-7557 or
Jack McIsaac (503)285-9111

Daily Breeze

Sunday,
November 19, 1989

Travel

Bill

FYI

Ann Stevens

HAL P.R.



Don
Chapman

*Rotterdam
gets a new
lease on life*

Copyright

Luxury liner transformed, pronto

Shipyard finishes nerve-racking job

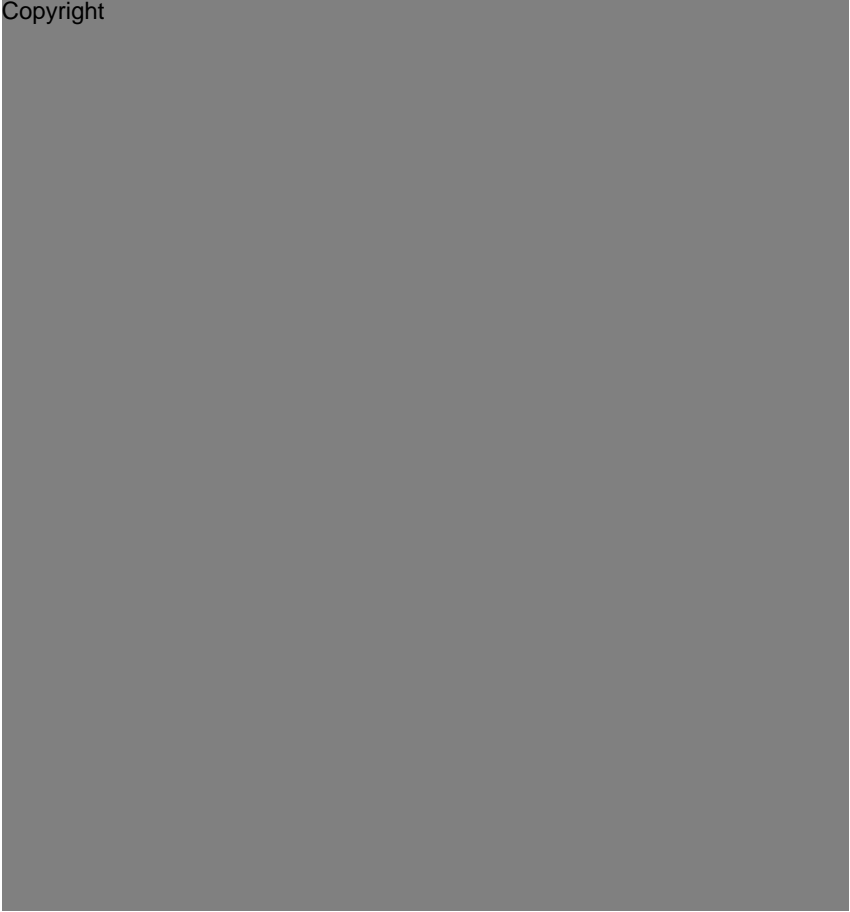
Copyright

Copyright

SHIPYARD

Continued from Page 1C

Copyright



Copyright



CONTRACT FOR REPAIR

of a

COMMERCIAL PASSENGER VESSEL

AGREEMENT, dated this 10th day of May, 1990, between NORTHWEST MARINE, INC., an Oregon corporation ("NWM"), and HOLLAND AMERICA LINE-WESTOURS INC., a Washington corporation ("HALW"), with respect to certain repair work to be done by NWM on the ms NIEUW AMSTERDAM, a commercial passenger vessel of Netherlands Antilles registry (the "Vessel") that is owned by Holland America Tours N.V., a Netherlands Antilles corporation for which HALW acts as agent, and which is engaged in the transport of passengers throughout the world.

The parties, having agreed upon certain commercial ship repair work to be done on the Vessel by NWM, hereby covenant and agree as follows:

PART I. STATEMENT OF WORK.

(A) Work Description. NWM agrees to furnish the materials, parts, supplies, tools, facilities, components, drawings, utilities and labor to perform the work described on Exhibit A hereto, as such may be modified, increased or decreased by Change Order (the "Work"). Other than as to planning and other preliminary matters included in the Work, the Work shall be performed at NWM's drydock facilities in Portland, Oregon.

(B) Compliance With Requirements Applicable to Vessel. NWM shall be responsible for performing and completing the Work in accordance with the applicable requirements (if any) of all governmental and regulatory authorities having jurisdiction over the Vessel including, without limitation, the U.S. Coast Guard, the U.S. Public Health Service and the Classification Society for the Vessel. NWM shall further be responsible for insuring that, upon conclusion of the Work, the Vessel is not in violation of any such requirements as a direct consequence of the Work having been performed.

(C) Inspection of Work. HALW shall have the right to inspect the progress of the Work at all times. HALW's inspection of the Work, or its failure to inspect, shall not in any way alter or diminish the obligations of NWM hereunder.

(D) Shop Drawings. From time to time prior to and during the performance of the Work, NWM shall, at the reasonable request of HALW or upon its own initiative, prepare and furnish to HALW shop drawings with respect to those aspects of the Work where the preparation of shop drawings in advance of actual performance is

appropriate. HALW shall promptly review all shop drawings so provided and approve or disapprove same except that approval shall not be unreasonably withheld. Properly disapproved drawings shall be corrected. Approvals shall not relieve NWM of its warranty obligations provided in Section III(A) below.

(E) Work by HALW. HALW shall, for its own account, have the right to perform work on board the Vessel with ship's crew or called in specialists during the time that the Work is being performed. NWM shall have no liabilities or obligations regarding any such work so performed by or on behalf of HALW. Such work shall be undertaken in such manner as shall not interfere with the performance of the Work by NWM. If in the performance of such work HALW or such specialists shall be negligent or reckless and such shall result in the death of, personal injury to, or damage to the property of, a third party, HALW shall indemnify NWM and hold it harmless from and against any losses, damages, causes of action, liabilities and expenses suffered or incurred by NWM and which result from such death, injury or property damage. NWM shall promptly notify HALW of any claims or causes of action asserted or commenced in respect of which HALW has liability to NWM under the immediately preceding sentence whereupon HALW shall, on behalf of NWM, assume the defense thereof through legal counsel selected by HALW.

(F) Providing of Materials by HALW. To the extent specified on Exhibit A, HALW shall order and pay for directly certain materials, parts and supplies for use by NWM in the performance of the Work. Vendors, specifications and lead order times for all such items shall be as specified by NWM in order to insure that items received are what would have been received had NWM ordered them itself, and are received at the same times as if NWM had ordered them itself. Amounts due NWM under this Agreement are exclusive of the cost of such items.

(G) Quality of Materials etc. All materials, parts, supplies and components used by NWM for the Work shall be suitable for their intended purpose and: (i) of the quality specified in Exhibit A; or (ii) if no quality standard is specified, then of such quality as is consistent with good marine practice.

(H) Authorized Representatives. Each party shall by notice to the other party, from time to time, designate one or more Authorized Representatives who shall have authority to act on behalf of said party for all purposes of this Agreement. Other than the Authorized Representatives, no person shall have authority to obligate a party under this Agreement or relieve the other party of any of its obligations under this Agreement including, without limitation, the execution of Change Orders. Notwithstanding the foregoing provisions of this Section, as to HALW the only persons with authority to amend this Agreement, designate or change Authorized Representatives or execute Change Orders involving an addition to or reduction in amounts otherwise due NWM hereunder of more than \$50,000 shall be HALW's President

and HALW's Senior Vice President-Cruise Operations. Notwithstanding the foregoing provisions of this Section, as to NWM the only persons with authority to amend this Agreement, designate or change Authorized Representatives or execute Change Orders involving an addition to or reduction in amounts otherwise due NWM hereunder of more than \$50,000 shall be NWM's General Manager. The initial Authorized Representatives of NWM is the NWM General Manager. The initial Authorized Representative of HALW is Nanne Hogendoorn.

(I) Disposal of Items Removed From Vessel. Any materials, parts, components or other items removed from the Vessel in connection with the Work shall, if requested in advance by HALW, be turned over to HALW whereupon HALW shall be responsible for their proper disposal in accordance with the requirements of applicable law. As to all other materials, parts, components and other items removed from the Vessel in connection with the Work, NWM shall be responsible for their proper disposal in accordance with the requirements of applicable law.

(J) Change Orders. In the event that HALW requests any modification, deletion or addition to the Work (as then constituted), the parties shall execute a Change Order which shall specify:

1. the modification, deletion or addition to the Work to be effected pursuant thereto;
2. the increase or decrease in the price for the Work resulting therefrom, provided, however, if the parties are unable to agree on the amount of such increase or decrease, then the Change Order shall still be executed without reference to the change in Price and such Change Order shall be deemed a "Time and Materials Change Order" for purposes of the following provisions of this Agreement; and
3. the change, if any, in the date on which the Work is to be completed.

No such modification, deletion or addition to the Work shall become effective unless and until a Change Order in respect thereof shall have been properly executed. As to any Change Order that is a Time and Materials Change Order: (i) the labor charges shall be \$36.00/hour for straight time labor and \$55.00/hour for overtime labor; (ii) all materials and subcontracts to be charged at NWM's cost; and (iii) additional governmental taxes, assessments and Port of Portland user fees (exclusive of any employment related taxes) shall be passed through without mark-up.

(K) Time Schedule. HALW shall cause the Vessel to arrive at NWM's drydock facilities no later than 24.00 hrs. on May 13, 1990. Subject to Change Order, the Work shall be completed, and the Vessel shall be in a position to leave the drydock facilities, no

later than 05.00 hrs. on May 21, 1990, provided, however, NWM shall not be responsible for any delay resulting from any cause or causes beyond the reasonable control of NWM including, without limitation, Acts of God, war, riots, civil disturbances, labor strikes and priorities or allocations of any public entity having jurisdiction. For these purposes, matters impacting the performance of NWM's subcontractors or vendors shall not be considered beyond the reasonable control of NWM unless they were also beyond the reasonable control of said subcontractor or vendor. The parties shall use their best efforts to minimize the adverse impact of any such delay.

(L) Subcontractors/Vendors. Subcontractors and vendors to be utilized for major or critical areas of the Work shall be subject to the prior approval of HALW, which approval shall not be unreasonably withheld or delayed.

(M) Status of NWM's Employees/No Liens. Neither the employees of NWM nor of any of its subcontractors or vendors shall be considered Vessel crew. NWM shall be solely responsible for the immediate release and discharge of any and all liens that may attach to the Vessel that arise from or are otherwise attributable to the Work or the presence of the Vessel at NWM's facilities (other than liens created by HALW or its affiliates) including, without limitation, mechanics and materialmen's liens arising from the work of NWM, the subcontractors and vendors of NWM and the employees of NWM, its subcontractors or vendors.

PART II. PRICE AND PAYMENT TERMS

(A) Amount. Identified on Exhibit A may be certain items of the Work as to which the parties have not reached agreement as to the price due to uncertainty regarding the amount of labor and materials actually required ("Time and Materials Work"). As to Time and Materials Work: (i) the labor charges shall be \$36.00/hour for straight time labor and \$55.00/hour for overtime labor; (ii) all materials and subcontracts to be charged at NWM's cost; and (iii) additional governmental taxes, assessments and Port of Portland user fees (exclusive of any employment related taxes) shall be passed through without mark-up. HALW agrees to pay the price set forth on Exhibit A plus amounts due for Time and Materials Work computed as above provided, as such may be adjusted by Change Order, in consideration for the Work. The price set forth on Exhibit A plus such amount for Time and Materials Work, as well as any change thereto agreed pursuant to a Change Order, includes all governmental taxes, assessments and user fees due and payable by HALW in connection with the Work including, without limitation, those imposed by the Port of Portland. NWM shall be responsible for the payment of all such taxes, assessments and user fees. Refunds of any such taxes, assessments or user fees realized by HALW or NWM shall be retained by or delivered to HALW, as the case may be, it being agreed that such refunds are the property of HALW.

(B) Terms. No discounts will be allowed.

(C) Progress Billings. NWM will deliver progress billings by telefax to HALW's Seattle office (206-286-3274; Attn: Cruise Operations) no later than 10:00 a.m. on every Friday during the period the Vessel is in drydock (or if Friday is not a business day, then on the immediately preceding business day) for 100% of the theretofore unbilled and completed portion of the Work. Progress billings shall contain sufficient detail so as to enable HALW to verify their accuracy. 95% of each progress billing shall be remitted to NWM by the close of the business on the immediately following Monday (or if Monday is not a business day, then on the immediately following business day), with the remaining 5% to be retained by HALW for payment together with the final billing payment as hereafter provided. Progress billings will only be made if the drydock period is in excess of ten (10) calendar days.

(D) Final Billing. Final billing for all completed Work not previously billed shall be effected as soon as practical after the completion of the Work. The final billing, together with amounts retained by HALW from progress billings, shall be paid by HALW within 15 calendar days of HALW's receipt of the final billing.

(E) Disputed Billings. In the event that HALW disputes any billing made as above provided and the parties are unable to resolve the dispute prior to the time at which payment is to be effected, HALW shall, if NWM shall so request, cause the amount in dispute to be deposited into an interest-bearing, federally insured commercial bank account in Seattle, Washington from which withdrawals may only be made upon the joint signature of HALW and NWM. Once the dispute has been resolved by the parties or by arbitration as hereafter provided, the amount at issue shall be paid from the account to HALW and/or NWM in accordance with the resolution with interest earned on the account to be allocated pro rata.

(F) Manner of Payment. HALW shall pay each billing by wire transferring the amount due to NWM's account at First Interstate Bank, Portland, Oregon, ABA No. 123000123 for credit to Account No. 552-0015229 in the name of NWM.

(G) Overtime Work. For purposes of determining amounts due in respect of Time and Materials Work and Time and Materials Change Orders, work shall be considered overtime work to the extent it is performed on Saturday, Sunday, a legal holiday (as defined by the collective bargaining agreement to which NWM is a party) or to the extent it is performed by workers who have already completed an 8-hour shift on a normal work day but then only to the extent it is performed following the conclusion of the 8-hour shift and during the same 24-hour period in which the 8-hour shift occurred.

PART III. LIMITED WARRANTY

(A) Terms of Limited Warranty. Subject to the provisions hereinafter set forth in this Part III, NWM agrees to remedy (whether by repair or replacement, as necessary), free of charge to HALW, any defects in the Vessel attributable to: (i) the workmanship of NWM under this Agreement; (ii) deficiencies in designs and/or drawings prepared by NWM in connection with the Work; or (iii) the failure of NWM to perform the Work in accordance with the requirements of this Agreement. NWM's liability under this Section III(A) shall extend only to defects discovered by HALW prior to the end of Guarantee Period (as hereafter defined) and in respect of which a timely Warranty Notice (as hereafter defined) is given to NWM.

(B) Guarantee Period. As used in this Agreement, the term "Guarantee Period" shall mean the 90-day period commencing on the day on which all Work is completed, provided, however, that as to any defect as to which a Warranty Notice is timely given during the 90-day period commencing on the day on which all Work is completed, the Guarantee Period shall extend until the end of the first 90-day continuous period during which the no further remedial work is required in respect of such defect. For all purposes of this Section 3(B), there shall be disregarded any days during which the Vessel is not available for service on account of defects which NWM is liable to make good as herein provided.

(C) Deficiency Notice. Claims by HALW against NWM under Section III(A) must be made by written notice from HALW to NWM given prior to the conclusion of the Guarantee Period (a "Warranty Notice"), each such notice to be sent by telefax to NWM at (503) 240-6600, Attn: General Manager.

(D) Remedy of Defects. The remedial obligations of NWM under Section III(A) shall be effected on board the Vessel (so long as such would not interfere with the normal operation or working schedule of the Vessel) or at such shipyard as is designated by NWM which shipyard must be one which would not unreasonably impair or delay the normal operation or working schedule of the Vessel and which is otherwise suitable for the purpose. In the event NWM fails to promptly designate a shipyard meeting the criteria above stated after being requested to do so by HALW, HALW may designate a shipyard suitable for the purpose by notice thereof to NWM. Where such would expedite repair work, NWM shall cause replacement parts to be promptly forwarded to the Vessel. NWM shall perform remedial work on a prompt basis giving due consideration to the severity and impact on HALW of the problem. HALW shall have the right to perform, or cause to be performed, at NWM's expense, the remedial work with HALW's personnel or utilizing third parties: (i) in emergency situations; (ii) in situations where NWM has failed to perform the work on a prompt basis; and (iii) in situations where NWM has agreed to permit such action by HALW. The time permitted NWM to effect the repair work before HALW shall have the right to effect the remedial work shall be determined

giving consideration to the seriousness of the defect and its impact on the operation and working schedule of the Vessel. Any parts or other items installed in connection with any remedial work shall be the property of HALW. All parts or other items removed in connection with any remedial work shall be the property of NWM.

(E) Limitation on Warranty Obligations. NWM shall have no obligation under Section III(A) for defects caused by: (i) normal wear and tear; or (ii) the failure of HALW to operate or maintain the Vessel in accordance with good marine practice.

(F) No Consequential Damages. HALW accepts the risk of, and NWM shall not be liable under Section III(A) for any, incidental, special or consequential damages of any nature whatsoever including, without limitation, claims related to delay or loss of use of the Vessel, lost revenues, lost profits, crew wages or shares, salvage or tug expenses, whether such damages be predicated upon an alleged breach of this Agreement, negligence by NWM, strict liability in tort or upon any other basis whatsoever, provided, however, if the damages are caused by any defect in the Vessel which NWM is liable for the remediation of as provided in Section III(A), then: (i) nothing contained in this Section shall be construed as relieving NWM of its obligation to pay incidental expenses directly related to the performance of such remedial work (such as, for example, drydock fees and tug expenses); and (ii) if the Vessel is required to be out of service as a direct consequence of the performance of such remedial work and, as a result, HALW is able to recoup all or part of its lost revenues under its passage money insurance policies, NWM shall reimburse HALW for the passage money insurance deductible.

(G) Warranties by Subcontractors. NWM's obligations under this Part III are not diminished or relieved by any provision or term of any warranty given by a vendor or subcontractor. If the terms of warranty or guaranty of any vendor or subcontractor are greater or more extensive in subject, time, remedy or any other term than those of NWM under this Part III: (i) NWM's responsibility shall extend to coincide with such warranty or guaranty to the extent such warranty or guaranty is honored by the vendor or subcontractor; and (ii) NWM shall, at HALW's expense, take all steps requested by HALW to obtain said fulfillment.

(H) Warranty of Title. NWM warrants that HALW or the affiliate of HALW that owns the Vessel shall have good and marketable title to each and every part, component or other item placed upon or made part of the Vessel as part of the Work, free and clear of all claims, liens, charges or encumbrances of any nature whatsoever other than those created by HALW or its affiliates.

(I) WARRANTY EXCLUSION. THE WARRANTIES SET FORTH IN THIS PART III ARE GIVEN IN LIEU OF ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY. THERE ARE NO WARRANTIES WHICH

EXTEND BEYOND THOSE EXPLICITLY SET FORTH IN THIS PART III. ANY WARRANTY, EXPRESS OR IMPLIED, THAT THE MATERIALS FURNISHED OR SOLD UNDER THIS AGREEMENT ARE MERCHANTABLE OR FIT FOR ANY PARTICULAR PURPOSE IS HEREBY DISCLAIMED.

PART IV. INSURANCE/POLLUTION MATTERS

(A) Maintenance of Insurance. During the period in which the Work is being performed and thereafter for the duration of the Guarantee Period, HALW shall, at its own expense, maintain and keep in force its customary insurance as to hull and machinery and protection and indemnity. HALW represents and warrants that, under the terms of such policies, coverage does not lapse as a consequence of the Vessel being out of service for the purpose of having the Work or any Part III remedial work performed.

(B) Pollution. HALW shall, during the period the Work is being performed, maintain in effect a Certificate of Financial Responsibility issued by the Federal Maritime Commission. Nothing contained herein shall, however, relieve either party of its liabilities and obligations in respect of environmental pollution resulting from its acts or omissions.

PART V. MISCELLANEOUS COVENANTS.

(A) Ballasting. If the Work contemplates that the Vessel will be hauled, HALW will cause her to be trimmed and ballasted as instructed by NWM.

(B) Safety Regulations. HALW shall familiarize itself and the Vessel's officers with NWM's safety and security regulations and shall cause the crew of the Vessel, and all persons having business with the Vessel, to comply with all NWM's security and/or safety regulations while within NWM's facility including, but not limited to, the use of personal protective gear.

(C) Invalidity. If any one or more of the provisions of this Agreement is found to be legally invalid, this Agreement shall be construed as if not containing such provision and the rights and obligations of the parties shall be construed and enforced accordingly.

(D) Integration and Modification. This Agreement contains the entire agreement of the parties regarding the subject matter hereof, and supersedes all prior discussion, negotiations, understandings, agreements, or representations with respect thereto. It shall not be changed, modified or altered in any way except by written instrument executed by the parties.

(E) Incorporation of Exhibits. Each of the Exhibits is hereby incorporated into and made a part of this Agreement.

(F) No Waiver. A waiver by either party of any right under this Agreement must be in writing and shall not be construed as a

waiver of any other right.

(G) Headings. Headings are for convenience only and do not form a part of this Agreement.

(H) No Third Party Beneficiary. This Agreement is intended solely for the benefit of the parties hereto and is not intended to benefit any third person or party.

(I) Right to Review Records. HALW shall, upon request, at all reasonable times (both during and following the conclusion of the Work) be provided with access to, and the right to reproduce, the records and materials supporting all time and materials charges of NWM under this Agreement together with records and materials relating to the payment by, or refunds to, NWM of taxes, assessments or user fees relating to this Agreement. For such period as HALW shall reasonably request, NWM shall provide on-site office facilities (including desks, telephones, fax and copying facilities and other similar facilities as HALW shall reasonably request) for two HALW accounting representatives who are assigned by HALW to monitor accounting aspects relating to the Work. The costs (telephone, copying etc.) incurred by such representatives shall be borne by HALW except that no rent shall be charged HALW for such facilities.

(J) No Improper Payments. Each party covenants and agrees not to offer or make any payment (in cash, in kind or otherwise) to any employee, officer or director of the other party or of any of its affiliates that could be construed as being a bribe or inducement to act or refrain from acting. If any such person shall solicit such a payment from NWM, NWM shall promptly notify the President of HALW by telefax, telefax No. (206) 284-8332. If any such person shall solicit such a payment from HALW, HALW shall promptly notify the General Manager of NWM by telefax, telefax No. (503) 240-6600.

(K) Arbitration. All claims, disputes and controversies between the parties arising out of or relating to this Agreement or the breach thereof shall be decided by arbitration in accordance with the Commercial Arbitration Rules of the American Arbitration Association, subject to the limitations of this subsection. Either party may initiate arbitration proceedings by giving notice to the other of its intent to arbitrate within sixty (60) days after the claim, dispute or controversy has arisen. All said proceedings will be brought in Portland, Oregon. The claim or dispute shall be determined by a single arbitrator. In the event the parties are unable to agree on an arbitrator, the arbitrator shall be appointed by the American Arbitration Association under the Commercial Arbitration rules then in effect. The arbitrator shall determine the claim or dispute in accordance with (i) the language of this Agreement, (ii) the general maritime laws of the United States, and (iii) the laws of the State of Oregon. The award rendered by the arbitrator will be final. Judgment may be entered upon it in any court having jurisdiction

thereof, and will not be subject to modification or appeal. The prevailing party shall be entitled to recover its reasonable attorney's fees which may be set by the arbitrator in the same proceeding. The prevailing party shall also be entitled to recover all costs and fees paid for the arbitration.

IN WITNESS WHEREOF, the parties have executed this Agreement on the date set forth opposite their respective signatures.

Dated: May 10, 1990

NORTHWEST MARINE, INC.

By William M. J. Janssen
Its Vice President

By William M. J. Janssen
Its Senior Vice President

Dated: May 10, 1990

HOLLAND AMERICA LINE-WESTOURS INC.

By A. K. Lanterman
Its President

Holland America Tours N.V. hereby acknowledges the authority of Holland America Line-Westours Inc. to act as its agent with respect to the above Contract For Repair of a Commercial Passenger Vessel.

HOLLAND AMERICA TOURS N.V.

By A. Kirk Lanterman
A. Kirk Lanterman, Proxyholder

90-D/DRYDOCK
5/10/90

ROTTERDAM
JOB 4904

THOUGHTS

- 1) There is no contract between Holland America Lines and Northwest Marine for S/S ROTTERDAM nor has there been for any vessel in the past.
- 2) All estimates were a negotiable budgetary number only with an agreement to re-negotiate each item upon completion of vessel.
- 3) Hydroblasting of sanitary water piping and asbestos removal caused a tremendous impact to the overall project. It took a considerable amount of people resources to accomplish and caused a major reschedule of priorities and assets. As a consequence, many repair items had to work overtime in order to complete on time.
- 4) Owner's Representative insisted that many items be moved to the left on the schedule in order for him to see major progress daily. This was due in part to the magnitude of the project and the time available to accomplish on time. In addition, he had additional work for us that needed to be completed and it was necessary to create the time.
- 5) There were 71 change orders to the M&R specifications and 107 change orders to the renovation specification after the vessel arrived in the shipyard. In addition, there were 73 items issued to the yard in August. This was the fault of no one but a consequence of the job's magnitude.
- 6) The project was well planned and thought out by all parties, but to accomplish the tremendous amount of work and deliver on time is a credit to HAL and NWM. Nobody could have ever foreseen all the difficulties encountered.
- 7) Asbestos handling laws changed January 1, 1989 that increased the cost of this project tremendously. We could do things in 1988 that we can't dream

Thoughts ..

Page 2

of doing today. Asbestos will continue to plague future efforts, but we should be more knowledgeable in the future and be able to predict the impact up front.

PROMENADE DECK VENTILATION ALTERATION

4904-345

This job was given to us in early July 1989. The Owner hired a ventilation engineering study (Van Sway) to remove the existing "fan room" and re-route in order to leave the Prom Deck, at the swimming pool area, free of this obstruction.

Van Sway
9/1/89
Van Sway produced drawings describing how to accomplish. The drawings were inadequate and lacked detail. Because of the vessel's sailing schedule, it was impossible to shipcheck this item properly. Notes on the drawing indicated to re-route all interferences found in the way of the new duct work, which was designed to pass through the overhead of passenger cabins.

With permission from the Owner's Representative, much of what Van Sway had designed was changed to accommodate conditions on board the vessel.

All joiner systems, pipe and ventilation insulation materials were asbestos and had to be dealt with properly.

The hydroblasting of sanitary piping had to be accomplished prior to commencement. With the amount of water and debris generated by this task, it would be impossible to work both simultaneously.

There was no way, with the information given, to adequately estimate the work scope properly.

RENEWAL OF THE FLOORS IN PASSENGER BATHROOMS

4904-325

Even though the new tile floor was laid over the existing tile, removals occurred in way of deck drains and the cove molding at the bulkhead. All tile and underlayment was removed, approximately two (2) square feet, in way of each deck drain to allow for resloping of the floor into the drain. In addition, the radius tiles at the intersection of the deck to the bulkhead had to be removed to allow for the new tiles to fit properly.

Also, with the flushing water piping hydroblast problems and asbestos insulation removal problems; it was necessary to accomplish most removals on overtime.

Re-insulation?

FINN STABILIZERS

4904-013

Do not understand the problem. It appears we did the job for exactly the total number of manhours, but with three hundred fifty-five (355) fewer premium hours.

DRYDOCK SERVICES - 4904-002

BERTHAGE SERVICES - 4904-004

As specified in Mr. N. Calley's letter dated January 5, 1990. these charges have been negotiated and settled between Mr. Adriaanse and Mr. Douglas Grainger, Surveyor for the Salvage Association.

MAIN GALLEY

4904-319

During the shipcheck and planning phases, all new equipment was to have an equal electrical power requirement as the existing unit and therefore, no additional power requirements were accounted for. After installation of equipment and left ready for electrical hook-up, it was discovered that many pieces of equipment had higher amperage requirements than the existing units. Working with the Chief Electrician, we had to locate and upgrade power panels to accept increases and install new cabling. By increasing wire sizes, the existing cables had to be removed in their entirety and renewed. Bulkhead penetrations also had to be enlarged. Additional ceiling panels had to be removed and in many cases, asbestos insulation had to be dealt with. Due to the age of the existing wiring, the insulation material on the wire was also asbestos and had to be treated accordingly.

Issue
The steam supply and return piping to the existing equipment came out of the ceiling and down to their respective piece of equipment. The new Bain Maries with removable plate warmers would not accommodate this arrangement. Therefore, the piping had to penetrate the deck into the overhead of "D" deck, rerouted and back up thru the deck into the bottom of each unit. All of the joiner system and insulation materials on "D" deck were asbestos.

Not all of the new equipment arrived in a timely manner so, using equipment drawings, there were pads welded to the deck for new pieces to land on at a later date. This did not always work as many pieces had to be relocated after the flooring materials were installed.

Main Galley

Page two

As the various pieces of equipment were set into position, per the drawings, shipboard personnel would come around and demand they be moved or repositioned to accommodate operation within the galley.

While all of this was going on, the galley continued to operate at capacity to prepare meals for the four hundred (400+) plus personnel reported to be living aboard during the availability.

#313
A.C. PLANT CHANGE OUT ADDITIONAL WORK AND DISRUPTION

A. New and Existing A.C. Units Remote Instrumentation:

Now
Due
Delivery of remote instrument panel and its wiring diagram were received near the end of the vessel's yard period. The actual connection information for remote read out connections on A.C. units then had to be located by Owner's Carrier Rep. By the time all this information was available, the chilled water and salt water systems were complete, filled, and tested. Remote read out pick up points on all A.C. units required thread "O" lets to be welded in all water piping systems. This required draining of branch system where valves would hold, and in some cases, draining entire units. Installation of these Thread "O" Lets interfered with on-going tests of A.C. units, and required additional manning to meet vessel's sailing schedule. These installations required Thread "O" Lets sensor installations, wiring bulkhead penetrations from A.C. room, back through generator room, evaporator room, boiler room, and into engine room upper level, and finally wiring installations and hook-up.

B. Bunker Tank 11-14 and Crossover Trunk:

To install the A.C. circulating pump foundation, it was found that under the new mounting position, an unknown bunker tank crossover trunk was found. This trunk connected bunker tanks U-14, stbd to port. Bunker tank 11 had been previously opened and empty, but 4" (inches) of oil was found in the bottom of crossover trunk. It was found that the isolation valve from bunker 14 was not holding, allowing remaining oil in bunker 14 to

A.C. Plant Change Out Additional Work and Disruption

Page two

leave into crossover. To accomplish our hot work, we opened out bunker 14, pumped and cleaned and gas freed bunker 14 and cross over tunnel.

C. Asbestos Abatement:

Note
Amur
The vessel's Owners did a great job of asbestos abatement prior to the vessel's arrival in Contractor's facility, but even with those efforts, the Contractor suffered numerous lengthy delays from residue asbestos found laying on wireways, and on pipe lines. Additional sections of hard sheathing overhead required removals for piping hangers and rigging pad eyes:

D. New Equipment Problem:

During start up of new A.C. units, various problems were found which required immediate corrections or alterations to allow units to run as designed.

1. Turbine Steam Stop Valves:

The original plans didn't require installation of steam stop valves at turbine inlets, but overhead stop valves were found to leak by to a point that Owner instructed the Contractor to purchase and install new welded, angle globe 2-1/2" steam stop valves. Valve installation required removal and reinstallation of piping insulation. Twenty-four hours (24) shut down time ^{was} ~~was~~ required on each unit to accomplish installation. This again delayed testing.

A.C. Plant Change Out Additional Work and Disruptions

Page three

2. The freon systems on both new units didn't work correctly, both units pull down and shut down. The Contractor was directed to purchase and install 1-1/2" expansion valves and piping on both units. This task required Carrier Corporation to pump down and isolate freon charges ^{while} with pipe and valve mods were accomplished. New valves allowed fine hand adjustments on both units, and kept units on line. This installation again delayed final testing by approximately 36 hours.

What
Several days
Disruption

3. Turbine Attached Lube Oil Pumps:

Turbine driven pumps would not pull suction from remote lube oil sumps. The Contractor installed piping and valving from electric start-up lube oil pump discharge to turbine driven pump suction pipe to pressure prime pumps.

4. Port A.C. Unit Lube Oil Cooler:

The Contractor disassembled and repaired a leaking head on port unit lube oil cooler.

5. Turbine Lube Oil Flush:

After turbine lube oil system flush was completed, Carrier Corp. required Contractor to open out all turbine bearings for final cleaning and inspection.

A.C. Plant Change Out Additional Work and Disruptions

Page three.

6. Governor:

A great deal of time was lost due to repeated unsuccessful attempts to set Woodward Speed Setting governors. Carrier technicians seemed unfamiliar with units.

7. Chilled Water Pump:

Again, we lost a lot of time trying to figure out why new pumps kept dropping off the line from high amperage draw. Final determination revealed that new motors required more current than controllers and supply cabling could supply. This was corrected by a change order which exchanged cabling from switchboard to and including change out of controllers. This was accomplished after vessel departed Portland going south.

E. Additional Piping Encountered:

1. A large spider shaped section of fuel oil transfer piping was found hidden under port A.C. unit. This spider required removal and modifications to allow installation of new larger A.C. unit.
2. Three sections of piping were uncovered after removal of existing A.C. units, which were found in poor condition needing repairs. These repairs were accomplished by change orders, but this work delayed reinstallation of new A.C. units components.

#311

BOW THRUSTER ADDITIONAL WORK AND DISRUPTION

A. Caterpillar Engine Resilient Mounts:

1. The initial alignment procedures when received from N.C. Engine Power (Caterpillar Eng) were far more involved than was expected. They involved initial alignment of the engine to the solid mounted angle drive gear, then wait for twenty-four (24) hours while resilient mounts settled, then realignment of engine to gear. The Owner supplied Factory Service Engineer, who directed alignment, directed us to set engine at .100" (inch) total indicated run out high, (.050" in actual) to allow for additional settling of mounts.

*More
insights*

2. After initial dock side operational tests of the new engine, both coupled and uncoupled, the vessel proceeded on river trials. During these trials, the input drive shaft for angle drive gear experienced bearing overheating and then failure. Subsequent inspections revealed that the engine had dropped .140" total indicated run out, leaving the engine too low in relation to gear box. This imposed undue load on gear box input bearing and shaft.
3. Repairs to reduction gear required total disassembly of angle drive gear internals, including input shaft, super bearing, and gear, heat and removal of output shaft coupling and removal of output shaft, shaft bearings and gear. Remove L.O. cooler, piping, and lube oil pump assembly. Complete cleaning of entire gear box internals and components. flushing out lube oil cooler and piping and inspection

Bow Thruster Additional Work and Disruptions

Page two

of oil pump. Reassemble output shaft and install. Heat and push coupling back on shaft. Enlarge lube oil supply tubing, providing oil to failed fwd. input shaft bearing. Upon arrival of new input shaft and bearing, assemble shaft, bearings, and gear in the shop. Lathe check and true assembly and transport to vessel. Install shaft assembly and set back lash and tooth contact. Close gear cover and make up lube oil system and refill.

4. Upon completion of assembly of gear box, under direction of N.C. Power Representative, realign engine, again leaving engine high to allow for further sag in resilient mounts. Align engine by shim packs above resilient mounts, and below engine flange. Final assembly and alignment was accomplished during transit north to Vancouver, B.C.
5. Upon arrival and testing of thruster in Vancouver, B.C., crews set up, rechecked and realigned engine three (3) more times during transit back to Portland.

B. Asbestos Problems:

Thruster bridge controls were installed on port and stbd. bridge wings and in pilot house. Routing of cabling for controls ran through overhead and bulkheads of sun deck, from elevator trunk fwd and then port and stbd. This entire area was insulated with asbestos insulation, requiring days of

Bow Thruster Additional Work and Disruption

Page three

11
Page 15
isolation and abatement efforts to allow cable installations, and deck penetrations for control stands. The heavy concentrations of blue colored asbestos had crews working around the clock for four (4) days to clear. This delay caused wiring installation to be delayed an equal amount of time, requiring additional overtime to be expensed to catch up with schedule. Additionally completion of cabins and passageways on Sun Deck were delayed by removals.

C. Diesel Oil Storage Tank:

Last minute input from regulatory bodies (Lloyds) required us to install a spill boundary around 5,000 gallon thruster diesel oil tank. The boundary was installed around bottom perimeter of tank at deck, with drain piping leading to the thruster tunnel void. Against the fwd bulkhead of the wash water tank in the tunnel void, we constructed a diesel oil spill containment tank.

D. Sea Valves:

The day prior to refloating the vessel, the Lloyd's Surveyor condemned the new overboard sea valves (3 each) and bilge pump overboard piping. (Dwgs were previously approved by Lloyds.) The Contractor located, purchased and installed a new 4" S.W. Ovbd. valve, a 1" angle drive gear box cooling ovbd. valve, and a 1" bilge pump overboard valve, and modified inboard piping as a result of new valve configuration changes. Most were accomplished throughout the rest of day and night to maintain undocking schedule. After undocking, the Contractor constructed new bilge pump

Bow Thruster Additional Work and Disruptions

Page four

discharge piping from no longer used sea valve, aft along "D" deck, through storage rooms to the pipe tunnel, near stores office, and into existing contaminated drain main.

E. Angle Drive Gear Box Lube Oil Cover:

Originally cooling water was to be supplied from engine cooling water pump supply. This was changed to an additional gear box salt water supply pump, motor, and controller installed as directed by Owner. This pumps suction pipe tee off thruster engines S.W. cooling supply line. During operational test, it was found that cooler pump would lose suction prime to engine pump, starving pump and cooler. Cooler pumps suction piping was rerouted and teed into new fire pump suction header.

F. Kamewa Hydraulic Pitch Control Systems:

After system installation and filling was complete, the Kamewa Service Engineer informed us that the pitch system hydraulic reservoir, was mounted two decks too low. (Installed by Kamewa input to architect's drawing.). The reservoir was drained, internally modified as per Rep's instructions, and mounted two decks higher near muffler. New piping, including deck penetrations was constructed, cleaned, and installed, to provide required additional head pressure for system.

Bow Thruster Additional Work and Disruptions

Page five

G. Thruster Engine and Pitch Control Wiring:

Very late input from Owner's bow thruster supplier, on wiring diagrams and requirements, prevented Contractor's architects from completing electrical wiring drawings on time. This delayed final wiring installations on bridge, sun deck and in main engine room, again delaying cabin and passage completion.

H. Emergency Diesel Fire Pump Day Tank:

The original item called for us to convert new diesel oil fill piping for thruster diesel oil tank and to tee off and supply existing fire pump engine dry tank. The Dutch Coast Guard then required us to convert vent piping from existing dry tank to the new loop seal piping returning to overflow drain piping located in "D" deck pipe tunnel.

I. Diesel Engine Wiring and Controls:

The Contractor furnished Owner's Representative (N.C. Engine Power) required the services of Contractor's electricians to assist with ringing out control and governing system circuits prior to and during engine start up.

Bow Thruster Additional Work and Disruptions

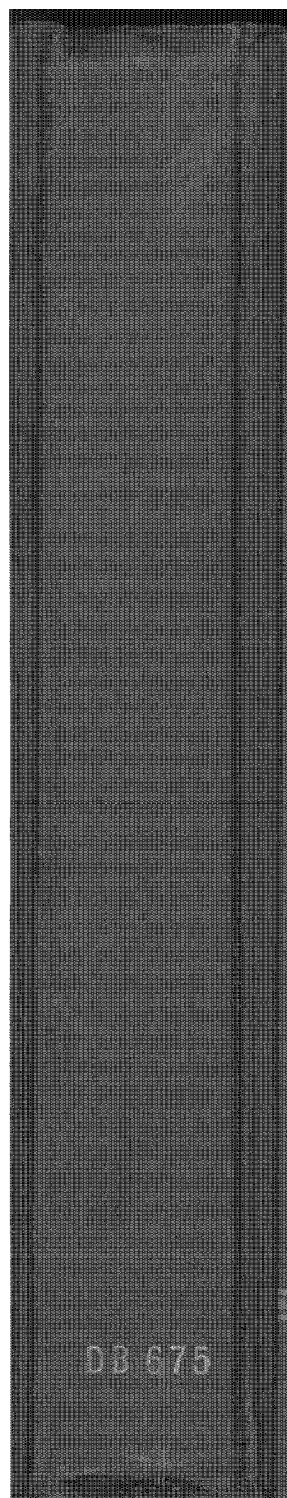
Page six

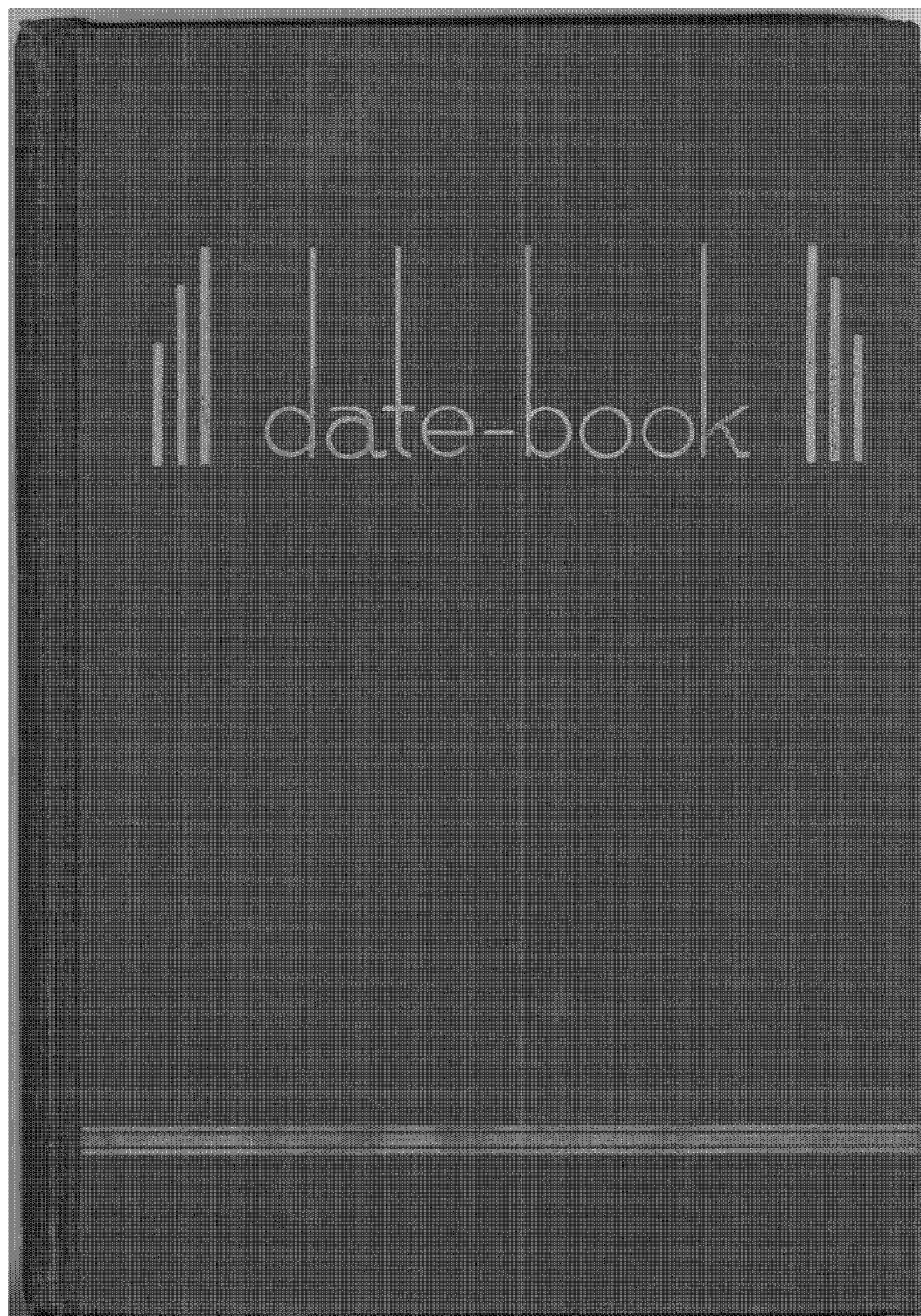
J. Diesel Engine Crank Case Ventilation:

After installation of diesel engine, the Contractor was required to install crank case ventilation piping in machinery room. New P.V.C. pipe connected to flexible fitting on engine, ran up near compartment overhead, and then ran fwd. to a point just aft of compartment exhaust terminal, using exhaust system vent to help scavenge crank case.



Vent





date-book

SHAW'S

DB 675

date-book



DB 675

1950

MADE BY WILSON JONES CO., U.S.A.

NAME

ADDRESS

TEL

1

JANUARY 1

Sunday
6676 "Mokupapa"

Term 4 X X
ck

JANUARY 2

2

Monday

6670 "Mokupapa"

Kerns J.

3

Tuesday

JANUARY 3

6670 "Mokupapa"

6704 "Hiram's Manin"

~~Rem. J.~~
Dredock

Manin started 2:00 AM.

JANUARY 4

4

Wednesday

6670 "Mokupapa"

Kim T.

6704 "Naam & Maam"

Dr. J. L. Lock

Maam on RD. 6:35 PM

5

JANUARY 5

Thursday

6670 "Mokupapa"

Kim T.

6704 "Naam & Maam"

Dr. J. L. Lock

JANUARY 6

Friday

6670 "Mokupapa"

6704 "Hiram's Maxim"

Hiram's

Drydock

Maxim afloat 9:00 A.M.

7

JANUARY 7

Saturday

6670 "Mokupapa"

6704 "Hiram's Maxim"

Hiram's

Drydock

Maxim completed 4:30 P.M.

JANUARY 8

8

Sunday

6670 "Mokupapa"

from N.

JANUARY 9

9

Monday

6670 "Mokupapa"

from N.

JANUARY 10

10

Tuesday

6670 Mokuapapa

Alvin 2x

11

Wednesday JANUARY 11

6670 Mokuapapa

Alvin 2x

JANUARY 12

12

Thursday

"6670" Mokupapa

Storm & K.

13

JANUARY 13

Friday

"6670" Mokupapa "

Storm & K.

JANUARY 14

14

Saturday

6670 "Wokupapa"

Term 2

15

JANUARY 15

Sunday

6670 "Wokupapa"

Thin & St.

JANUARY 16

16

Monday

6670 "Makupapa"

6670 "Makupapa"

17

Tuesday

JANUARY 17

6670 "Makupapa"

6670 "Makupapa"

JANUARY 18

18

Wednesday

6670 'Mokupapa'
6452 John Cropper

John & X.

19

Thursday

JANUARY 19

6670 'Mokupapa'

John & X.

Cropper started & completed

JANUARY 20

20

Friday

6670 "Mokupapa"

~~6670 "Mokupapa"~~

21

Saturday

JANUARY 21

6670 "Mokupapa"

~~6670 "Mokupapa"~~

JANUARY 22

22

Sunday

6670 "Makapapa"

Kent X.

23

JANUARY 23

Monday

6670 "Makapapa"

Kent X.

JANUARY 24

24

Tuesday

6670 "Mokupapa"
6740 "Felix Rosenberg"
6738 "China Victory"

~~Kerm X~~
Term #1
Swan Is. Drydock

25

Wednesday

JANUARY 25

6670 "Mokupapa"
6738 "China Victory"

~~Kerm X~~
Swan Is. Drydock

Rosenberg started
Rosenberg completed

China Victory started 8:00 AM
China Victory dry 5:35 PM

JANUARY 26

26

Thursday

6670 "Mokupapa"
6738 "China Victory"

At 7:00
S. Id. N. N.

27

Friday

JANUARY 27

6670 "Mokupapa"
6738 "China Victory"

At 7:00
S. Id. N. N.

China Victory undocked 1:05 PM

28

JANUARY 28

Saturday

6670 "Mokupapa"
 6738 "China Victory"

[Faint handwritten notes]
 Swan 201 D.D.

29

JANUARY 29

Sunday

6670 "Mokupapa"
 6738 "China Victory"

[Faint handwritten notes]
 Swan 201 D.D.

JANUARY 30

30

Monday

6670 "Mokupapa"

6738 "China Victory"

K & K
Swan Is. Ad.

Mokupapa moved from Tern & Tille
Is. to ~~Swan~~ Is. at noon.

31

Tuesday

JANUARY 31

6670 "Mokupapa"

6738 "China Victory"

Swan Is.
Swan Is. Ad.

FEBRUARY 1

32

Wednesday

6670 "Mokupapa"
6738 "China Victory"
6748 "Linfield Victory"

Swan Is.
Swan Is. Ld.
" " "

33

FEBRUARY 2

Thursday

6670 "Mokupapa"
6738 "China Victory"
6748 "Linfield Victory"

Swan Is.
Swan Is. Ld.
" " "

China Victory completed 4:30 PM

FEBRUARY 3

34

Friday

6:6670 "Mokupapa"
6:6748 "Infield Victory" Swan Is.
" "

35

Saturday

FEBRUARY 4

6670 "Mokupapa"
6748 "Infield Victory" Swan Is.
Swan Is.

FEBRUARY 5

36

Sunday

66670 "Mokupapa"
66748 "Linfield Victory"

*Swan Is.
Swan Is.*

37

FEBRUARY 6

Monday

6670 "Mokupapa"
6748 "Linfield Victory"
6452 "John Cropper"

*Swan Is.
Swan Is.
Col Basin*

*Cropper started ~~8:00 AM~~ 2/6
Cropper completed — 2/6*

Linfield dry at 3:05 PM.

FEBRUARY 7

38

Tuesday

66670 "Mokupapa" Swan Is.
66748 "Linfield Victory" Swan Is.

*Mokupapa moved at 3:00 PM to
Kern & Litter.*

"Linfield" undocked at 5:05 PM

39

Wednesday

FEBRUARY 8

6670 "Mokupapa" ~~Swan Is.~~
6748 "Linfield Victory" Swan Is.

FEBRUARY 9

40

Thursday

66670 "Mokupapa"
66748 "Linfield Victory"

Kern & Kille
Swan Is.

41

Friday

FEBRUARY 10

6670 "Mokupapa"
6748 "Linfield Victory"

Kern & Kille
Swan Is.

FEBRUARY 11

Saturday

66670 "Mokupapa"
 66748 "Linfield Victory"

*Kern & Kibbe
 Swan Is.*

FEBRUARY 12

Sunday

6670 "Mokupapa"
 6748 "Linfield Victory"

*Kern & Kibbe
 Swan Is.*

FEBRUARY 13

Monday

66670 "Mokupapa"

Kern & Tikh

66748 "Linfield Victory"

Swan Is.

USMC Requirements completed
4:30 PM on Linfield.

FEBRUARY 14

Tuesday

6670 "Mokupapa"

Kern & Tikh

6748 "Linfield Victory"

Swan Is.

FEBRUARY 15

46

Wednesday

6670 "Mokupapa"

Kern & Tibbe

6748 "Linfield Victory"

Swan Is.

47

FEBRUARY 16

Thursday

6670 "Mokupapa"

Kern & Tibbe

6748 "Linfield Victory"

Swan Is.

Linfield completed 4:30 P.M.
Add. Owners obligation (Pumping
water from Flooded #1 Hold)

FEBRUARY 17

48

Friday

6670 "Mokupapa"

from 9 till 11

6670 "Mokupapa"

from 1 till 11

Zinfeld sailed 4:00 AM.

49

Saturday

FEBRUARY 18

50

FEBRUARY 19

Sunday

6670 "Mokupapa"

Item & Title

51

FEBRUARY 20

Monday

6670 "Mokupapa"

Item & Title

FEBRUARY 21

52

Tuesday

6670 "Mokupapa"

Ken & Kibbe

53

FEBRUARY 22

Wednesday

6670 "Mokupapa"

Ken & Kibbe

FEBRUARY 23

54

Thursday

66 70 "Mokupapa"

Kern & Tille

55

FEBRUARY 24

Friday

66 70 "Mokupapa"

Kern & Tille

FEBRUARY 25

56

Saturday

6670 "Mokupapa"

Kern & Fitts

57

FEBRUARY 26

Sunday

6670 "Mokupapa"

Kern & Fitts

FEBRUARY 27

58

Monday

6670 "Mokupapa" Kern & Kille

59

FEBRUARY 28

Tuesday

6670 "Mokupapa"

6452 "John Cropper"

Kern & Kille

Col. Egan

Cropper started 8:00 A.M.

FEBRUARY 29

60

Wednesday

61

Wednesday
Thursday

MARCH 1

6670" Mokuapa

Swan Is.

On Sydney 9:15 AM.

*Mokuapa moved at 7:00 AM. to
Swan Is.*

MARCH 2

62

Thursday

6670 "Mokupapa"

Swan Isl.

63

MARCH 3

Friday

6670 "Mokupapa"

Swan Isl.

*off drydock 9:00 AM and to
Fudger Pier at Swan Isl. on*

MARCH 4

64

Saturday

6670 "Mokupapa"

Swan Is.

65

Sunday

MARCH 5

6670 "Mokupapa"

Swan Is.

MARCH 6

66

Monday

6670 "Mokupapa"

Swan Id.

Full Dock Trial held.

67

Tuesday

MARCH 7

6670 "Mokupapa"

Swan Id.

ofc
Moved to Kern & Ribbe 7:00 AM

MARCH 8

68

6670 "Mokupapa"

~~Thurs~~
~~Jan 21~~
~~Alm & K.~~

~~On day dock 9:15 AM~~

~~Mokupapa moved to Alm & K.~~

69

MARCH 9

6670 "Mokupapa"

~~Thurs~~

~~Jan 22~~
~~Alm & K.~~

MARCH 10

70

Saturday

6670 "Mokupapa"

fern & K.

71

MARCH 11

Saturday

Mokupapa completed 4:30 PM

MARCH 12

72

Monday

7

73

Monday

MARCH 13

MARCH 14

74

Thuesday

75

MARCH 15

Wednesday

6452 "John Cropper"

West Coast

Started & completed same day.

MARCH 16

76

Thursday

77

MARCH 17

Friday

Mokupapa sailed ^{late} P. M or early morning.

APRIL 5

96

Wednesday

97

APRIL 6

Thursday
0452 John Cropper

Col. Basin

98

APRIL 7

Friday

6452 John Cropper

Col Basin

99

APRIL 8

Saturday

Cropper completed 4:30 PM

APRIL 17

108

Monday

109

APRIL 18

Tuesday

6855" Hledge Clackamas" Dry Dock

110

APRIL 19

Tuesday

6855 "Bridge Clackamas"

111

APRIL 20

Thursday

6855 "Bridge Clackamas" H.D.

APRIL 21

112

Friday

6855 Dredge "Clackamas" N.H.

113

Saturday

APRIL 22

6855 Dredge "Clackamas" N.H.

114

APRIL 23

Sunday

6855 Bridge "Clackamas" A.A.

115

APRIL 24

Monday

6855 Bridge "Clackamas" A.A.

116

APRIL 25

Tuesday

6855 "Hedge Clockman" D.D.

117

APRIL 26

Wednesday

6855 "Hedge Clockman" D.D.

APRIL 27

118

Thursday

6855 Dredge "Clackamas" N.H.

119

Friday

APRIL 28

6855 "Clackamas" Dredge Drydock

Clackamas completed at
noon.

MAY 15

136

Monday

137

MAY 16

Tuesday

6900" Arcadia Victory

Swan Rd.

Arcadia started 8:00 AM

138

MAY 17

Wednesday

6900 "Arcadia Victory"

Swan Is.

139

MAY 18

Thursday

6900 "Arcadia Victory"

Swan Is.

Arcadia completed 5:00 PM

JUNE 8

160

Thursday

18 1900

161

JUNE 9

Friday

6982 "Harry T"

Term. #1

"Harry T" started A.M.

162

JUNE 10

Saturday

6982 "Harry T."

Term #1

163

JUNE 11

Sunday

6982 "Harry T."

Term #1

Completed 6-11-50 (4:00 PM)

JUNE 12

164

Monday

165

JUNE 13

Tuesday

6988 "John Cropper"

Swan Is.

*Cropper started 8:00 AM
on dry dock 08:00 AM.*

JUNE 14

166

Wednesday

6988 "John Cropper" Swan 2d.

Off drydock at 8:00AM

167

Thursday

JUNE 15

6988 "John Cropper"

Swan 2d.

JUNE 16

168

Friday

6988 "John Cropper" Swan Is.

169

169

Saturday

JUNE 17

6988 "John Cropper" Swan Is.

JUNE 18

170

Sunday

6958 "John Cropper"

Swan Is.

171

JUNE 19

Monday

6958 "John Cropper"

Swan Is.

JUNE 20

172

Tuesday

6988 John Cropper

Swan Is.

173

JUNE 21

Wednesday

6988 John Cropper

Swan Is.

Cropper completed on noon.

JULY 10

192

Monday

193

JULY 11

Tuesday
7075 *Jeremiah's Block* *Termin*

Started 10:00 A.M.

Completed 4:00 P.M.

JULY 14

196

Friday

7090 "Arcadia Victory"
7100 "Rutgers Victory"

Swan 2d.
" "

Arcadia started 11:00 AM
Rutgers started 11:00 AM

197

JULY 15

Saturday

7090 "Arcadia Victory"
7100 "Rutgers Victory"

Swan 2d.
" "

Arcadia dock 4:05 AM
Arcadia off dock 9:55 AM

Rutgers docked 12:40 AM

198

JULY 16

Sunday

7090 "Arcadia Victory"

7100 "Rutgers Victory"

*Swan Del.**" "**Rutgers off dock ~~5:30 AM~~ 6:00 AM*

199

JULY 17

Monday

7090 "Arcadia Victory"

7100 "Rutgers Victory"

*Swan Del.**" "**Arcadia completed 3:00 PM
Arcadia sailed 3:45 PM*

200

JULY 18

Tuesday

7:00 "Rutgers Victory" Swan Isl.

15

201

JULY 19

Wednesday

7:00 "Rutgers Victory" Swan Isl.

JULY 20

202

Thursday

7:00 " Rutgers Victory

Susan St.

203

JULY 21

Friday

7:00 " Rutgers Victory

Susan St.

JULY 22

Saturday

7100 "Rutgers Victory"

Swan Is.

JULY 23

Sunday

7100 "Rutgers Victory"

Swan Is.

206

JULY 24

Monday

7:00 "Rutgers Victory"
 7:28 "Swarthmore Victory"

Swan Id.

7:28 "Swarthmore Victory" Swan
 "

207

JULY 25

Tuesday

Rutgers completed 7-24-50, 4:30 PM

Swarthmore docked 6:10 PM

208

JULY 26

Wednesday

7128 Swathmore Victory

Swan 2, 7128

209

JULY 27

Thursday

Swathmore Victory

Swan

Swathmore undocked 6:00 AM

210

JULY 28

Friday

7/28 Swathmore Victory: Swan

211

JULY 29

Saturday

7/28 Swathmore Victory: Swan

212

JULY 30

Sunday

7128 "Swathmore Victory" Swan

213

JULY 31

Monday

7128 "Swathmore Victory" Swan

AUGUST 1

214

Tuesday

7128 "Swathmore Victory" *Swan*
7154 "A. S. William Allen White" *Swan*

White docked 5:45 PM

215

Wednesday

AUGUST 2

7128 "Swathmore Victory" *Swan*
7154 "A. S. William Allen White" *Swan*

White
Start work at 8:00 PM

AUGUST 3

216

Thursday

7128 "Swarthmore Victory"
7154 "William Allen White"

217

Friday

AUGUST 4

Swan 7128 "Swarthmore Victory" Swan
" 7154 "William Allen White" Swan

White undocked 6:00 AM

~~Swarthmore~~ Completed 4:30 PM

218

AUGUST 5

Saturday

7154' William Allen White Swan

219

AUGUST 6

Sunday

7154' William Allen White Swan

220

AUGUST 7

Monday

7154 William Allen White Swan
 7192 Newcastle Victory Swan Lake 2

White completed 4:30 PM

Newcastle started

221

AUGUST 8

Tuesday

7192 Newcastle Victory Swan B-2

AUGUST 9

222

Tuesday

7192 "Newcastle Victory" Swan B-2

223

Thursday

AUGUST 10

7192 "Newcastle Victory" Swan B-2
7207 "Newcastle Victory" " " "

7192 completed

7207
Newcastle Victory started 8:00 AM

AUGUST 11

224

Friday

7192 "Newcastle Victory" Swan
7207 " " " "

225

Saturday

AUGUST 12

7192 Newcastle Victory Swan
7207 " " " "

On R.R. - #7192
Aug 2:25 PM

226

AUGUST 13

Sunday

~~7192~~ 7192 Newcastle Victory Swan
7207 " " "

227

AUGUST 14

Monday

7192 Newcastle Victory Swan
7207 " " "

228

AUGUST 15

Tuesday

7192 Newcastle Victory Swan
7207 " " "

229

AUGUST 16

Wednesday

7192 Newcastle Victory Swan
7207 " " "

AUGUST 17

230

Thursday

7192 'Newcastle Victory' Swan
7207 " " "

231

AUGUST 18

Friday

7192 'Newcastle Victory' Swan
7207 " " "

OCTOBER 16

Monday

7435 "Ocean Mail"
7436 "Indian Mail"

*Term #1
St Helena*

Ocean Mail completed 9:00pm

OCTOBER 17

Tuesday

7436 "India Mail"

*St Helena
Term*

OCTOBER 18

*Wednesday**7436 India Mail**Term 1*

OCTOBER 19

*Thursday**7436 India Mail**Term 1*

OCTOBER 20

294

Friday

7436 India Mail

Permit 1

295

OCTOBER 21

Saturday

7436 India Mail

Permit 1

OCTOBER 22

296

Sunday

7436 "India Mail" *1*

21

297

OCTOBER 23

Monday

7436 "India Mail" *1*

India Mail completed 4:30 PM

NOVEMBER 7

312

313

NOVEMBER 8

Wednesday
7511 "Newcastle Victory" Swan N. N.

*Started 8:00 AM
Completed — 4:30 PM.*

RATES OF POSTAGE

Official at time of printing. As changes are likely consult Post Office

United States and Possessions

- First Class**—Letters, written and sealed matter for local delivery or otherwise per oz. 3c.
Air Mail—Anywhere United States Domestic Mail Service is in operation per oz. 5c.
- Second Class**—Newspapers, magazines and other periodicals, entered as second class matter, when mailed by the public, 1c for each 2 ounces or fraction thereof, or the fourth class rate, whichever is lower.
- Third Class**—(limit 8 ounces) Circulars and other miscellaneous printed matter, also merchandise 1½c for each 2 ounces. Books, (including catalogs) of 24 pages or more, seeds, cuttings, bulbs, roots and plants, 1c for each 2 ounces.
- Fourth Class (Parcel Post)**—Merchandise, printed matter and all other mailable matter not in first, second or third class. Zone rates apply. Consult nearest Post Office for rates.
- Special Handling**—Fourth class matter only. Parcels of fourth class matter indorsed "Special Handling" will be given the most expeditious handling, transportation and delivery practicable (but not special delivery) upon payment, in addition to the regular postage, of the following charge: Up to 2 lbs., 10c; over 2 lbs. up to 10 lbs., 15c; over 10 lbs., 20c.
- Registered Mail** (postage extra)—20c to \$1.35 including indemnity of \$5 to \$1,000. Declaration of value must be made to P. O.—not on article. 4c fee charged for return receipt for domestic registered mail when requested at time of mailing.
- Special Delivery** (postage extra)—First class, to 2 lbs., 13c, over 2 to 10 lbs., 20c; over 10 lbs., 25c.
 Other classes—to 2 lbs., 17c; over 2 to 10 lbs., 25c; over 10 lbs., 35c.
- Postal Cards**—Government, souvenir and private if within Department size 1c
- MONEY ORDERS**—Domestic money order fees as follows:
- | | |
|-----------------------------|------------------------------|
| \$ 0.01 to \$ 2.50 . . . 6c | \$20.01 to \$40.00 . . . 15c |
| 2.51 to 5.00 . . . 8c | 40.01 to 60.00 . . . 18c |
| 5.01 to 10.00 . . . 11c | 60.01 to 80.00 . . . 20c |
| 10.01 to 20.00 . . . 13c | 80.01 to 100.00 . . . 22c |

Postage to Foreign Countries

- Letters for Argentina, Bolivia, Brazil, Canada, Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, Guatemala, Haiti, Honduras (Republic), Labrador, Mexico, Morocco (Spanish Zone), Newfoundland, Nicaragua, Panama, Paraguay, Peru, Salvador, El, Spain and possessions, Uruguay and Venezuela** per oz. 3c
- Single Postal Cards** . . . 2c **Double Postal Cards** . . . 4c
- All other foreign destinations, not listed above:**
- Letters** . . . 3c first ounce, 3c each additional ounce.
- Single Postal Cards** . . . 3c **Double Postal Cards** . . . 6c
- International Reply Coupons:**
 A reply coupon costing 9 cents, may be purchased at Post Office for enclosure to your correspondent in any of the above named countries *except Nicaragua*. Presented at the foreign post office it will be exchanged for a postage stamp of sufficient value to prepay an ordinary letter to the U. S. A. Thus, an American may prepay the reply postage of his foreign correspondent.

A. Harrington Dorotka

M. Bauman

Oct 28 - 7 day

Nov 28 - 8 hrs

4-19-50 } No
 4-11-50 } Pay!
 5-26-50 } 4 NRS

Sick Leave 8/1/50

Nov 27 - 8 hrs

Dec 1 - 4 hrs